



Preview - Information



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Google Slides Lessons Preview





Alberta Math Curriculum Statistics– Grade 4

3-Part Lesson Format

Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Quotes
- And More!

STATISTICAL QUESTIONS

Learning Goal

We are learning to identify and create statistical questions using real-life examples and simple surveys so we can collect relevant data and make sense of the information to answer these questions.

STATISTICAL QUESTIONS

Drag and drop the questions into the boxes below.

Statistical Question	Not Statistical Question
How many students in your class are wearing a red shirt?	How many students in your class are wearing a blue shirt?
How many students in your class are wearing a green shirt?	How many students in your class are wearing a yellow shirt?
How many students in your class are wearing a purple shirt?	How many students in your class are wearing a pink shirt?

Part 2 – Action!

- Writing
- Matching
- Drag and Drop
- Drawing
- And More!

Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!

STATISTICAL QUESTIONS

Write your own problems for the statistical questions below.

Question	Statistical	Not Statistical
How many students in your class are wearing a red shirt?	Yes	No
How many students in your class are wearing a blue shirt?	Yes	No
How many students in your class are wearing a green shirt?	Yes	No
How many students in your class are wearing a yellow shirt?	Yes	No
How many students in your class are wearing a purple shirt?	Yes	No
How many students in your class are wearing a pink shirt?	Yes	No



Alberta Math Curriculum Statistics- Grade 4

TALLY MARKS

Drag the tally marks that match the # of students in the table.

Mode of getting to school	# of Students	Tally
Walking	4	
Car	1	
Bus	1	
Bike	1	

LINE PLOT

Create a line plot based on the data below.

Students were asked how many books they read and the data is shown below.

Name	# of Books
Tom	2
John	3
Leah	4
Sam	2
Emily	1

1 = 1 Book

# of Books	Number
1	
2	
3	
4	
5	
6	
7	
8	
9	

Questions

1. Which mode of transport is most popular?

2. How many students like basketball and football combined?

3. How many more students chose soccer over basketball?

PICTOGRAPHS

Create a pictograph based on the data below.

Students were asked what their favorite sport is.

Favorite Sport	# of Students
Baseball	10
Soccer	15
Football	20
Swimming	5

★ = 5 Students

Favorite Sport	Number
Baseball	
Soccer	
Football	
Swimming	

Questions

1. Which sport is the most popular?

2. How many students like basketball and football combined?

3. How many more students chose soccer over swimming?



Alberta Math Curriculum Statistics- Grade 4

HORIZONTAL BAR GRAPH

Use the data to draw a horizontal bar graph. The scale is shown on the right.

Category	Value
Apples	12
Pears	8
Oranges	5
Strawberries	10
Blueberries	7

1 2 3 4 5 6 7 8 9 10

ONE-TO-ONE VS MANY-TO-ONE

Draw 4 students' names on separate cards. Draw them randomly and record the results on the grid below. Use the bar graph below.

Favorite Book - Grade 4

Book Title	Number of Students
Harry Potter	4
Diary of a Wimpy Kid	3
Charlotte's Web	2
Wonder	1

Favorite Book - Grade 5

Book Title	Number of Students
Harry Potter	2
Diary of a Wimpy Kid	1
Charlotte's Web	1
Wonder	1

Book Title	Grade 4	Grade 5
Harry Potter	4	2
Diary of a Wimpy Kid	3	1
Charlotte's Web	2	1
Wonder	1	1

1 2 3 4 5 6 7 8 9 10

DISPLAYING DATA USING DIFFERENT GRAPHS

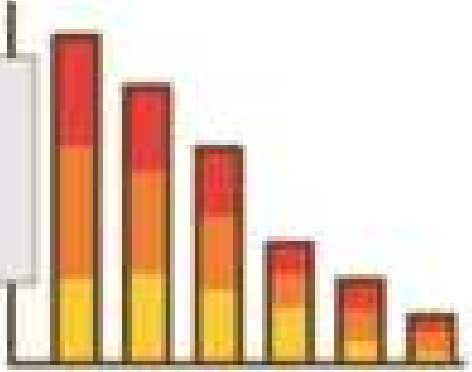
Answer the questions below.

Category	Value
Apples	12
Pears	8
Oranges	5
Strawberries	10
Blueberries	7

1 2 3 4 5 6 7 8 9 10



Grade 4 Statistics



	Curriculum Expectations	Pages
5.1	<p>Students evaluate the use of scale in graphical representations of data.</p> <ul style="list-style-type: none"> Engage in a statistical problem-solving process. Select an appropriate scale to represent data. 	65
	<p>data.</p> <ul style="list-style-type: none"> Compare different graphs of the same data. Interpret data represented in various graphs. 	

Preview of 50 pages from
this product that contains
104 pages total.



What is a Statistical Question?

When we ask a statistical question, we can collect data that answers that question.

A **statistical question** is a question that could have more than one answer.

A statistical question is **not** a question that has only one answer.

Statistical questions can have numbered answers or worded answers.

Not a Statistical Question	Statistical Questions
1) How many dogs do you have? (could have one answer)	1) How many dogs do the students in grade 4 have? (could have many different answers)
2) What is your favourite colour?	2) What is the favourite colour of 4 th graders? (could have many different answers)

Practice

question is a statistical question – yes or no?

Question	Yes	No
1) How long does Henry use a computer each day?	Yes	No
2) How many minutes do the students in grade 4 spend reading a book each day?	Yes	No
3) How many vegetables do the students in grade 4 eat each day?	Yes	No
4) How many vegetables do the parents of the students in grade 4 eat each day?		No
5) How many treats does Ross eat each day?	Yes	No
6) How many video games does Aaron have?	Yes	No
7) How many video games do the students in grade 4 have?	Yes	No
8) Do the students in grade 4 have a phone?	Yes	No
9) Does Ben have a phone?	Yes	No
10) Did Jordan get perfect on the last science quiz?	Yes	No

Statistical Questions - Predictions

When we create our own statistical questions, we should have a prediction or guess as to what the results will be. This prediction will either verify our understanding or teach us something new about our population.



Question	Prediction
How long does it take the students in grade 4 to get to school?	Least - 5 minutes Most - 30 minutes

Practice making your own predictions for the statistical questions below

Question	Prediction	
1) Which drink is the most popular in my class? - milk, juice, water, pop, etc.		
2) Which subject does your class like the most? - math, science, language, art or gym?		
3) How many minutes do students in my class watch shows/movies each day?	Least	Most
4) How many minutes do the teachers at my school watch shows/movies each day?	Least	Most
5) How many fruits or vegetables do students in my class eat each day?	Least	Most
6) How many fruits or vegetables do teachers in my school eat each day?	Least	Most

Name: _____

Tally Marks

= 1	= 2	= 3	= 4	= 5
= 6	= 7	= 8	= 9	= 10

Part 1 Count the tally marks

_____	_____	_____	_____
_____	_____	_____	_____

Part 2 Draw tally marks that match the number

6 =	11 =	
16 =	14 =	18 =
27 =	34 =	

Part 3 Which is greater? Use the > or <

7 _____	11 _____	13 _____
---------	----------	----------



Tally Marks and Frequency Tables

Part 1

Fill in the table by writing in the frequency of the tally marks

1. The students in a class were asked what their favourite sport is. The results are listed below. Fill in the frequency of the tally marks in each category below.

Category	Football	Hockey	Basketball	Soccer
Tally		###	### ##	###
Frequency				

- a) How many people participated in the survey? _____
- b) Which sport is the most popular? _____
- c) Which sport was the least popular? _____
- d) How many more people liked hockey than basketball? _____



Part 2

Fill in the table by drawing the tally marks for each frequency

2. Henry asked his friends what food they liked the best. He forgot to write down the names, but he wrote down the frequency. Help him fill in the table by drawing the tally marks.

Category	Pizza	Sandwich	Hot Dogs	French Fries
Tally				
Frequency	13	5	12	9

- a) How many friends participated in the survey? _____
- b) Which food is the most popular? _____
- c) How many more friends liked French fries than sandwiches? _____

Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class

Name: _____

Fill in the tally table below

Favourite Subject		
Subject	Tallies	Frequency
Math		
Science		18
English		9
Gym		
Music		24

Name: _____

Fill in the tally table below

Favourite Subject		
Subject	Tallies	Frequency
Math		
Science		18
English		9
Gym		
Music		24

Name: _____

Fill in the tally table below

Favourite Subject		
Subject	Tallies	Frequency
Math		
Science		18
English		9
Gym		
Music		24

Name: _____

Fill in the tally table below

Favourite Subject		
Subject	Tallies	Frequency
Math		
Science		18
English		9
Gym		
Music		24

PREVIEW

Survey Using Tally Marks

Directions

Survey your classmates using the statistical question below using tally marks.

Statistical Question: What is the most popular pet in our class?

Category	Cat	Dog	Fish	Bunny	Other
Tally					
Frequency					

a) How many classmates participated in the survey? _____

b) Which pet is the most popular? _____

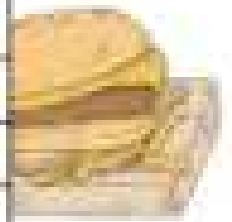
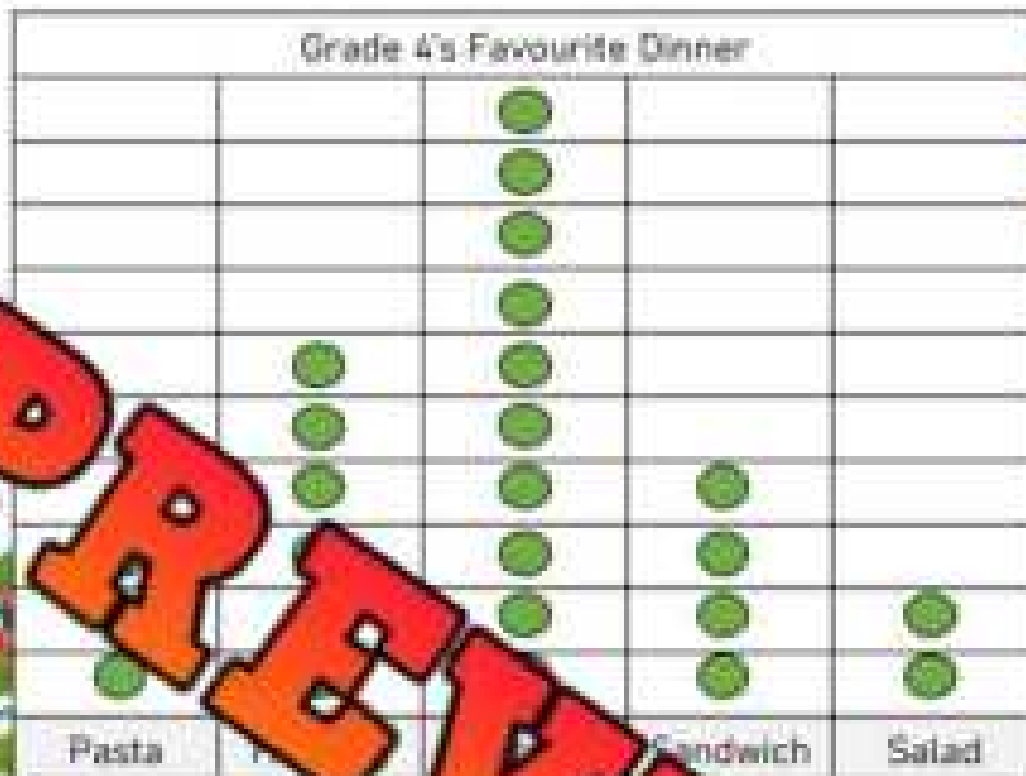
c) What did you learn about the data?

_____d) What other pet could you include?

_____e) If you asked the rest of your school, which category do you think would be most popular? Explain.

Reading a Line Plot – Favourite Dinner

Grade 4's Favourite Dinner



Dinner	Pasta	Hot Dog	Burger	Sandwich	Salad
Frequency					

Questions

Read the line plot and answer the questions.

a) Write the statistical question for the graph.

b) Which dinner was the most popular?

c) Which dinner was the least popular?

d) How many total people were asked the survey question?

e) How many more people like burgers than salad?

f) Would a line plot be a good graph if you had a lot of data - over 100 responses? Explain

Creating a Line Plot – Favourite Colour

Questions

Survey your class and use the data in a line plot

Statistical Question: What is the favourite colour of the grade 4s?

Instructions – When a classmate tells you their favourite colour, put a dot in the box above the colour.

Grade 4's Favourite Colour					
Red	Blue	Green	Pink	Purple	Orange






PREVIEW

- 1) Which colour is the most popular?
- 2) Which colour is the least popular?

Horizontal Pictograph - Candy

A **pictograph** is a graph that displays data using symbols or pictures. They often use many-to-one versus one-to-one correspondence.

Sam and his friends collected candy on Halloween. The amount of candy each friend collected is displayed below in the pictograph.

Friend	Number of Candies Collected	Frequency
Sam		
Steve		
Tony		
Jill		
Stacy		



= 4 Candies

a) How much is one candy worth?

b) Who collected the most candy?

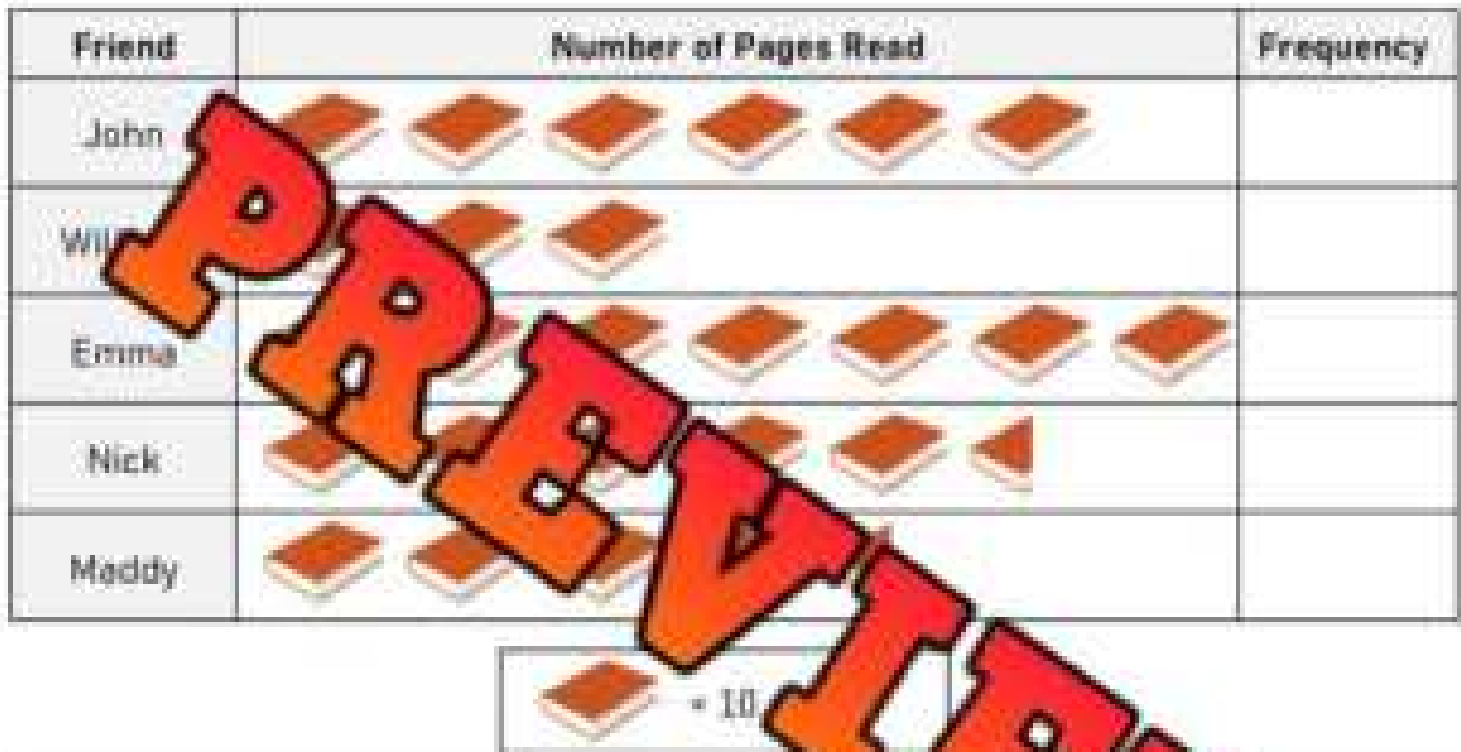
c) How much more candy did Jill collect than Tony?

d) Did Sam and Steve collect more or less candy than Stacy and Jill?

e) How much total candy was collected?

Horizontal Pictograph - Books

Mr. Wilson's class had a competition to see who could read the most pages in their books in a week. The results have been displayed in the pictograph below for the top 5 readers in the class.







- | | |
|---|--|
| a) How many pages is one book worth? | |
| b) How many pages is half a book worth? | |
| c) Who read the most amount of pages? | |
| d) How many total pages were read by these 5 students? | |
| e) Who got third place in the competition? | |
| f) How many more pages did Emma read than William? | |
| g) Did Nick and William read more or less pages than Maddy and John? Explain. | |


Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

Fill in the table and answer the question.





Friend	Kilometers Run	Frequency
Ted		
Anne		
Bella		
Craig		


 = 3 kilometers

How many total kilometers did all 4 friends run?

Name: _____

Fill in the table and answer the question.

Friend	Kilometers Run	Frequency
Ted		
Anne		
Bella		
Craig		

 = 3 kilometers

How many total kilometers did all 4 friends run?

Name: _____

Fill in the table and answer the question.

Friend	Kilometers Run	Frequency
Ted		
Anne		
Bella		
Craig		

 = 3 kilometers

How many total kilometers did all 4 friends run?

Name: _____

Fill in the table and answer the question.

Friend	Kilometers Run	Frequency
Ted		
Anne		
Bella		
Craig		

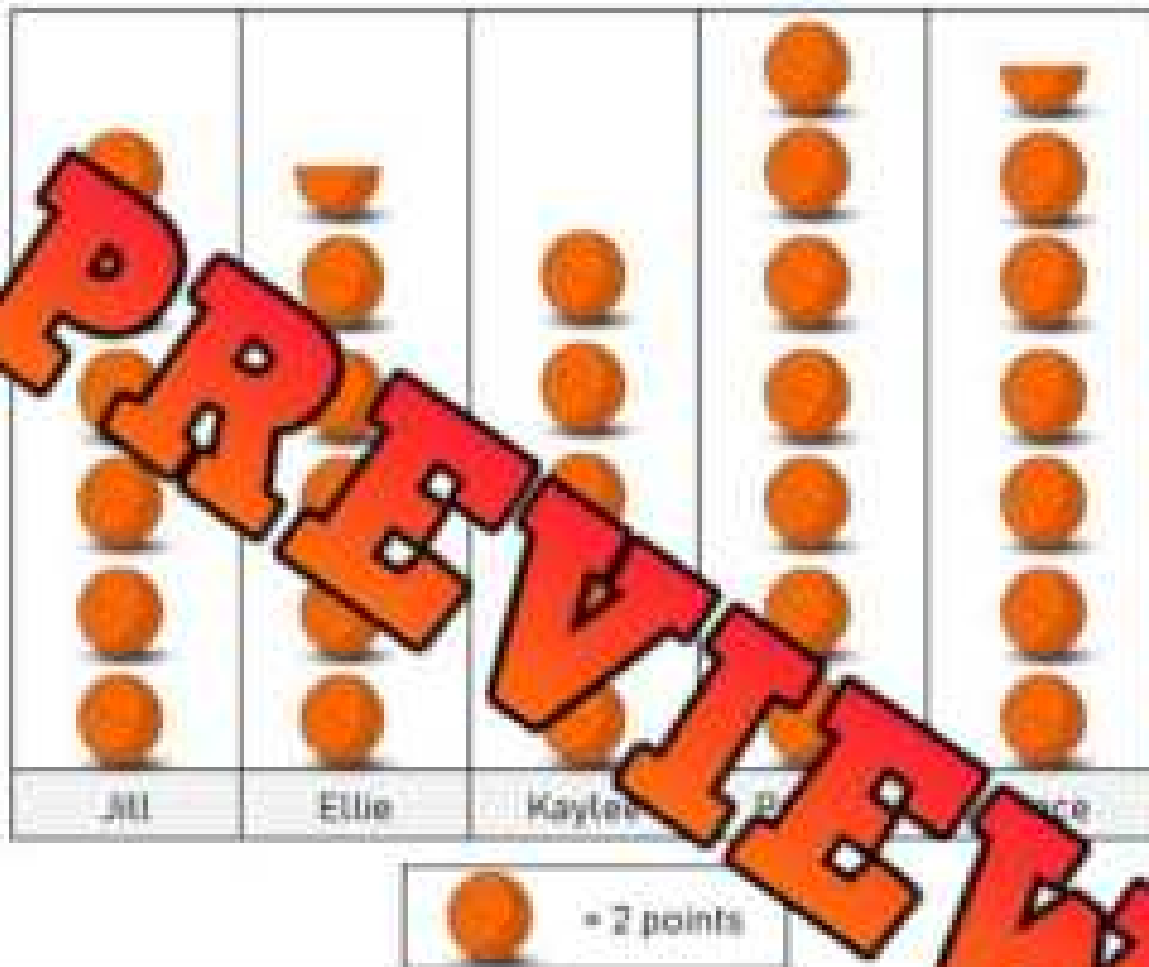
 = 3 kilometers

How many total kilometers did all 4 friends run?

PREVIEW

Vertical Pictograph – Basketball Points

Grace's basketball team counted how many points each of the players scored in a tournament. The point totals for the starting 5 are displayed below in a pictograph.



- | | |
|--|--|
| a) How many points is one basketball worth? | |
| b) How many points is half a basketball worth? | |
| c) Who scored the most points in the tournament? | |
| d) How many total points did all 5 girls score? | |
| e) How many more points did Jill score than Ellie? | |
| f) Did Payton and Kaylee score more or less than Grace and Ellie? | |
| g) Did Jill and Ellie score more or less points than Grace and Kaylee? | |

Vertical Pictograph – Canned Food

Maplewood Public School had a canned food drive last month. The students in each class brought in cans of food. The totals for each grade are displayed below in the pictograph.



 = 10 cans

- | | |
|--|--|
| a) How many cans is one picture worth? | |
| b) How many cans is half a picture worth? | |
| c) Which class brought the greatest number of cans? | |
| d) How many total cans were brought in at Maplewood Public school? | |
| e) How many more cans did the grade 3's bring in than the grade 6's? | |
| f) How many more cans did the grade 6's need to win? | |

Creating a Vertical Pictogram

James participated in a reading challenge last week. He read each day and wrote down how many minutes he read for each day of the week.



Sunday	15
Monday	30
Tuesday	20
Wednesday	15
Thursday	35
Friday	40
Saturday	20



PREVIEW

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday



= 10 minutes

1) What day did he read the most?

2) How many more minutes did he read on Friday than Wednesday?

3) Did James read more or less on Monday and Tuesday than he did on Friday and Saturday?

Creating a Horizontal Pictograph

Kevin and his friends went to an arcade on Saturday. They had a contest to see who could win the most tickets from the arcade games. The results are displayed in the table below.

Kevin	110
Neil	50
Steve	75
Dane	100
Chris	80



Questions

The pictograph displays the data above.

Kevin	
Neil	
Steve	
Dane	
Chris	



= 10 tickets

1) Who won the most tickets?	
2) How many more tickets did Dane win than Neil?	
3) How many more tickets did Kevin get than Steve?	
4) Neil and Chris think they have more tickets than Steve and Dane. Are they right?	
5) How many total tickets did the 5 kids win?	

Creating a Vertical Pictograph

Colton played 5 games of basketball last week. The number of points he scored in each game is displayed below. Create a pictograph to show his points.

Game 1	Game 2	Game 3	Game 4	Game 5
20	16	18	14	24



1) Which game did he score the most points? _____ Least points? _____

2) Did he score more or less points in games 1 and 2 than games 4 and 5? _____

3) How many total points did he score in all 5 games? _____

Creating a Pictograph

Questions

Survey your class and use the data to draw a pictograph

Statistical Question: _____

Option				
Talk				
Fun				

LEGEND
 = _____

Questions

1. Which option was the most popular?

2. Which option did the most people like? Which option did the least people like?

3. What did you learn about your class?



Vertical Bar Graph – Favourite Sport

The kids at camp were asked which sport they liked the best. They surveyed each kid and the results have been displayed below in a vertical bar graph.



a) Which sport was the most popular?

b) Which sport was the least popular?

c) How many people chose gymnastics as their favourite?

d) How many kids liked basketball and soccer the best?

e) How many kids liked hockey more than football?

f) What two sports add up to the total votes that hockey received?

g) How many kids were surveyed?

Horizontal Bar Graph – Favourite Hobby

100 people were surveyed about their favourite hobby.
The results have been displayed in the graph below.



Favourite Hobby



a) Which hobby is the most popular?

b) What are the 2 labels (titles) for the x and y axis?

(x) _____
(y) _____

c) How many people chose video games as their favourite?

d) How many people liked playing outside and TV the best?

e) How many people liked sports more than watching YouTube?

f) What two hobbies add up to the amount of people who chose playing outside?

g) How many people were surveyed?

Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class

Name: _____

Favourite Ice Cream Flavours

1) Which category of ice cream is most popular?

2) How many people were surveyed?

Name: _____

Favourite Ice Cream Flavours

1) Which category of ice cream is most popular?

2) How many people were surveyed?

Name: _____

Favourite Ice Cream Flavours

1) Which category of ice cream is most popular?

2) How many people were surveyed?

Name: _____

Favourite Ice Cream Flavours

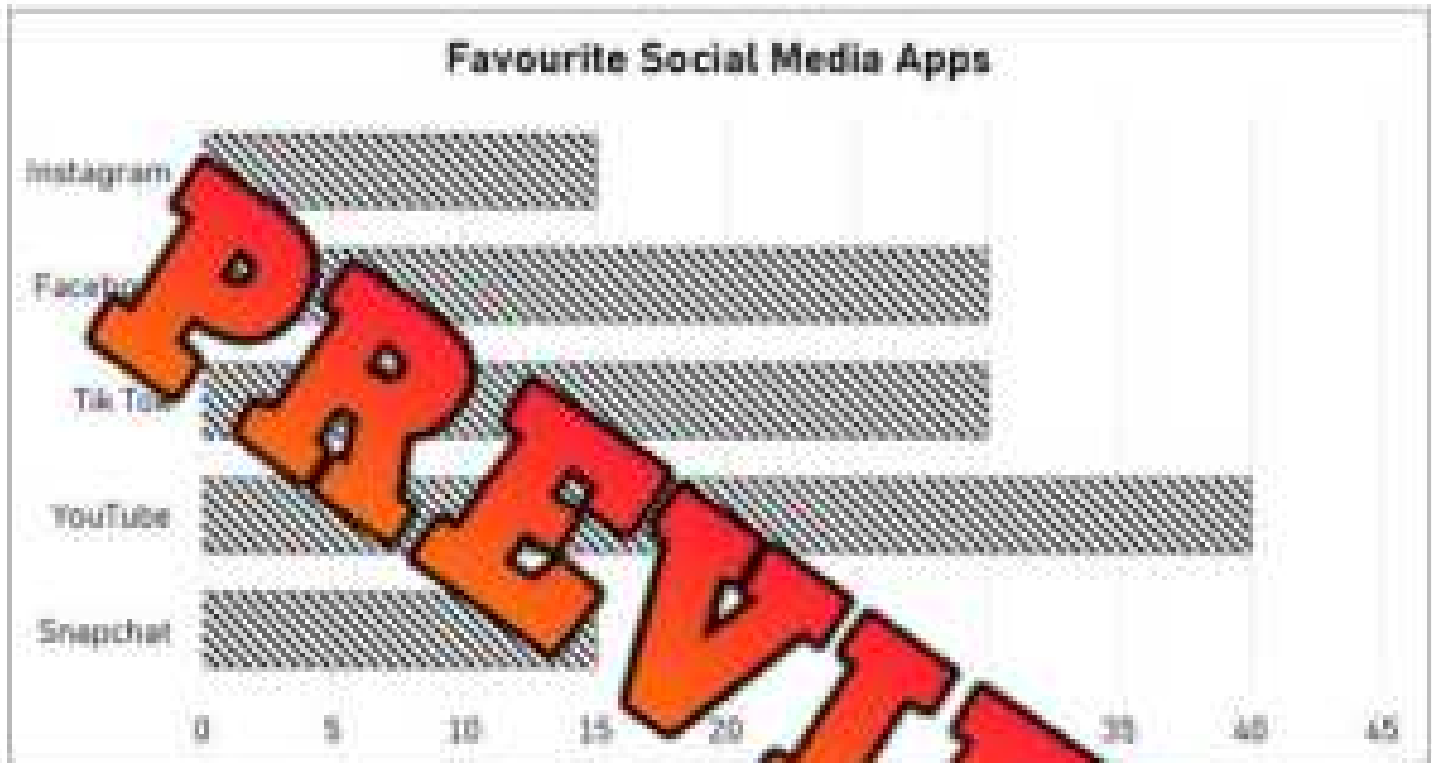
1) Which category of ice cream is most popular?

2) How many people were surveyed?

PREVIEW

Reading a Horizontal Bar Graph – Social Media

The students in grade 4 were asked which social media app was their favourite. The results have been displayed in the horizontal bar graph below.



Part 1

Fill in the frequency table by reading the graph.

Snapchat	YouTube	Tik Tok	Instagram	Facebook

Part 2

Answer the questions below

a) What is the scale on the graph? What does it go up by?	
b) How many grade 4 students were surveyed?	
c) Which social media was the most popular? How many votes did it get?	
d) Henry thinks more students liked YouTube than Snapchat and Instagram combined. Is he correct – Yes/No?	

Reading a Vertical Bar Graph - Favourite Beverage

A restaurant wants to know which drinks to keep in stock. They decide to keep track of what types of drinks customers are ordering in their restaurant for one day.



Part 1

Fill in the frequency table by reading the bar graph.

Coffee	Juice	Pop	Tea	Water

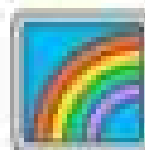
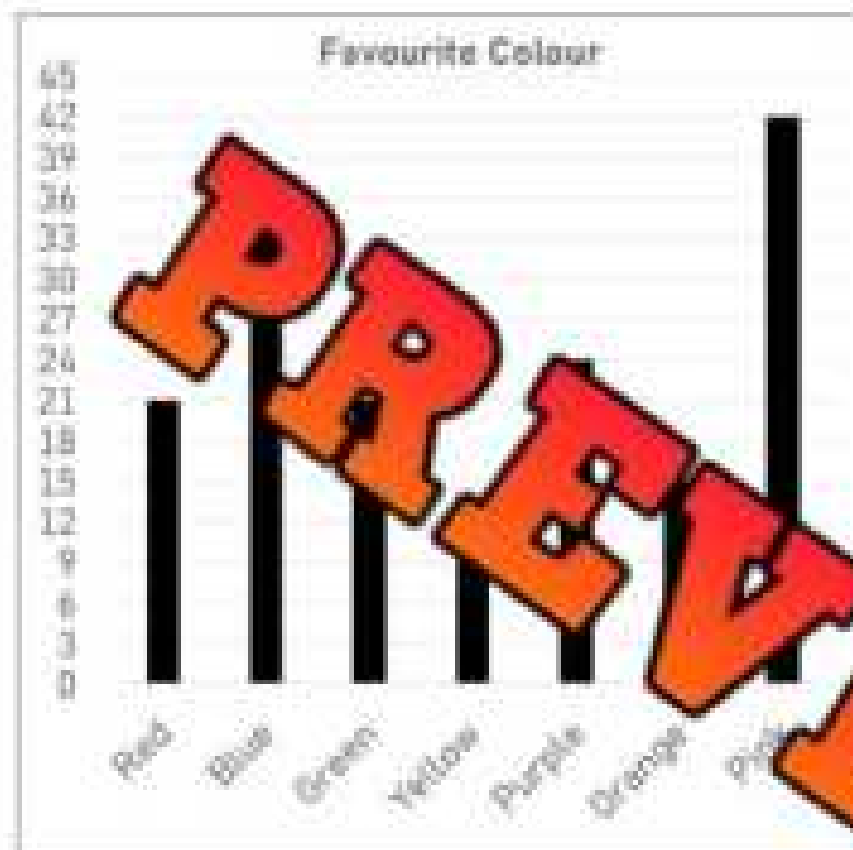
Part 2

Answer the questions below.

1) Which drink should the restaurant keep in stock?	
2) How many more coffees were ordered than juice?	
3) How many drinks were ordered for the day?	
4) How many customers ordered coffee and tea?	
5) Did more customers order pop and water than coffee?	

Vertical Bar Graph – Favourite Colour

The students in grade 4 were asked which colour was their favourite. The results of the survey have been displayed in the bar graph below.



Red	
Blue	
Green	
Yellow	
Purple	
Orange	
Pink	

a) Which colour was most popular?

b) The title of the graph is not specific enough. What would you change it to?

c) What is the scale of the graph?

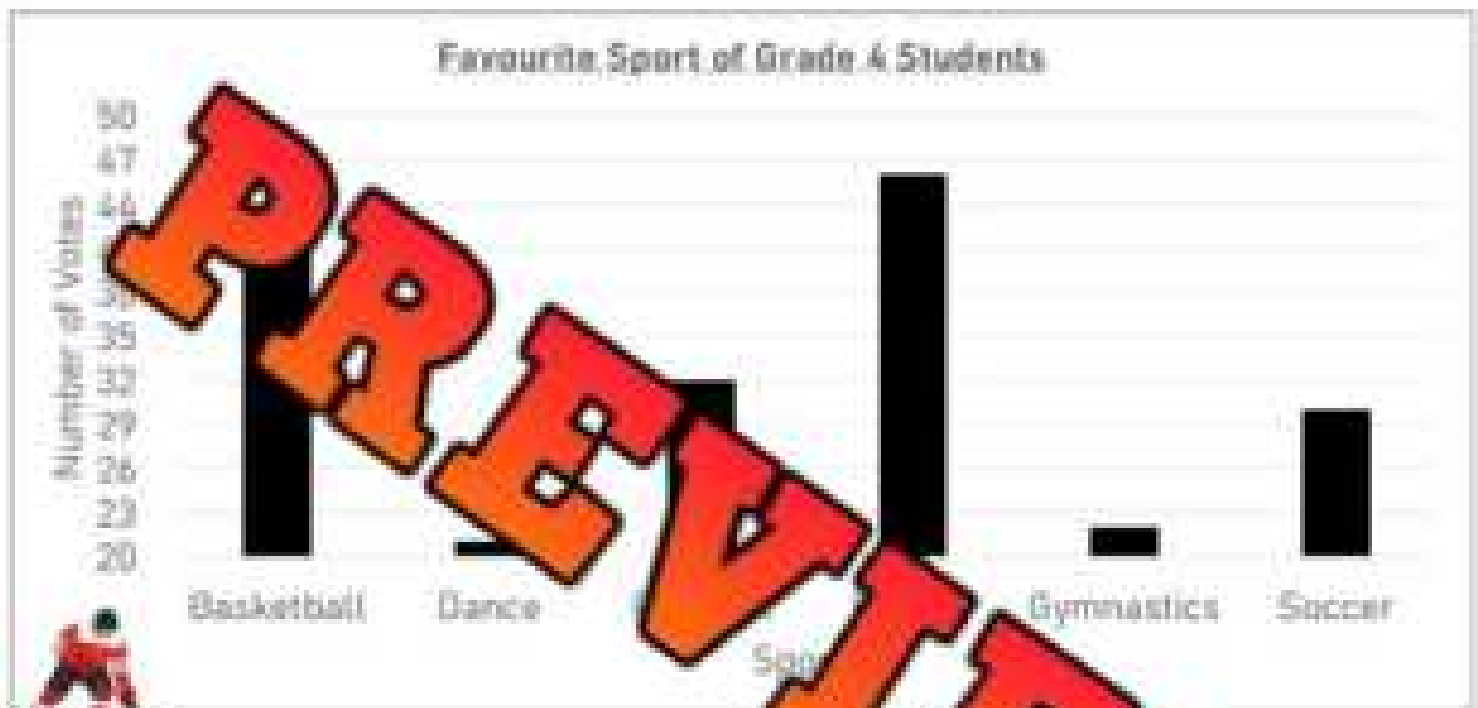
d) Was pink more popular than yellow and orange together?

e) Which two colours add up to pink?

f) How many people were surveyed?

Reading a Bar Graph – Line Break

The students in grade 4 were asked which sport was their favourite. The results have been displayed in the bar graph below. Notice the scale on the x-axis uses a line break.



a) What number does the scale on the y-axis start with?

b) What is the scale on this graph? What does it go up by?

c) What is the title of the bar graph?

d) What are the 2 labels (titles) for the x and y axis?

e) How many more votes did hockey get over dance?

f) How many students participated in the survey?

(a) _____

(b) _____

One-to-One vs Many-to-One

The students in grade 4 were asked which colour was their favourite. The results of the survey have been displayed in the bar graphs below.

Favourite Colour – Scale = 1



Favourite Colour – Scale = 2

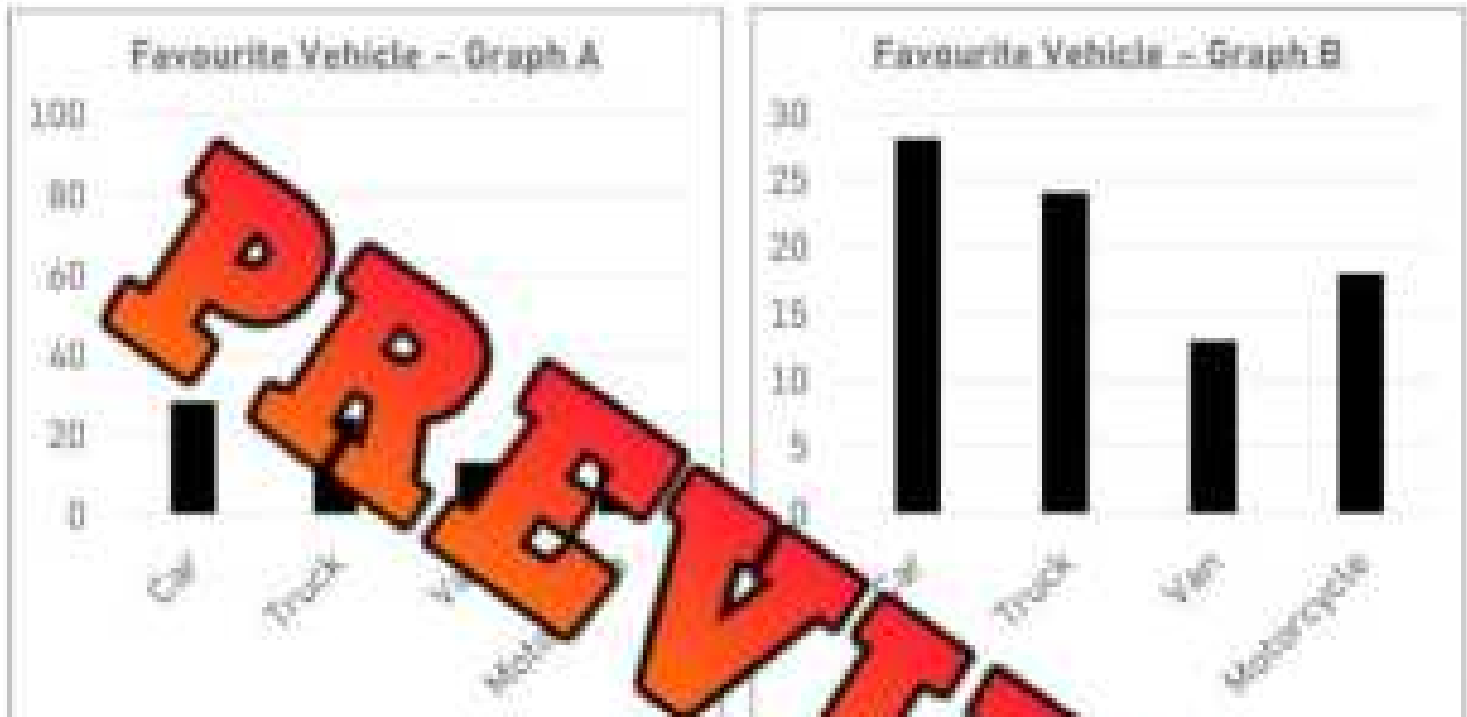


- Which colour was the most popular?
- Which colour was the least popular?
- How many more people liked red than orange?
- How many people were surveyed?

e) What is different about the two graphs? Which graph is easier to read?

Favourite Vehicle – Examining Scale

The two graphs below display the same data. Examine both graphs and answer the questions below.



Questions

What do you notice about the graphs?

- | | |
|--|--|
| a) What is the scale in Graph A? | |
| b) What is the scale in Graph B? | |
| c) Which graph uses more of the space? | |
| d) Which graph is better? Why? | |
| e) What other scales could you use for the data? | |
| - Go up by _____ | |
| - Go up by _____ | |

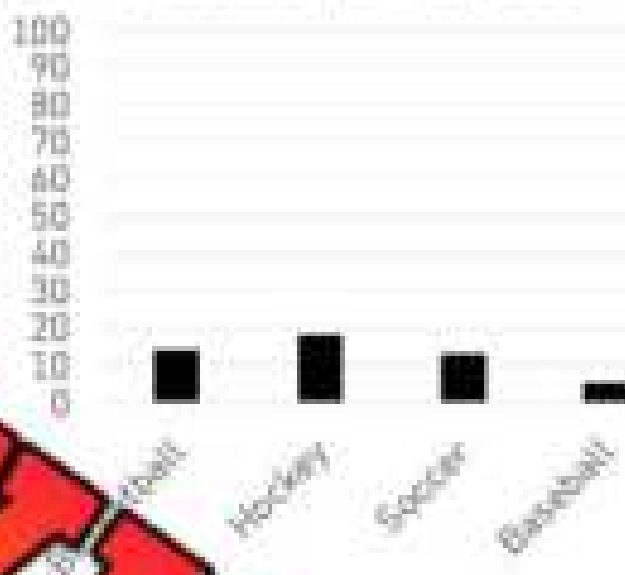
Favourite Sport – Examining Scale

The two graphs below display the same data. Examine both graphs and answer the questions below.

Favourite Sport – Graph A



Favourite Sport – Graph B



Questions

What do you notice about the two graphs?

a) What is the scale in Graph A?

b) What is the scale in Graph B?

c) Which graph uses more of the space?

d) Which graph is easier to read and interpret? Why is that graph better?

e) Why is it important to choose an appropriate scale?

Favourite Subject – Examining Scale

The two graphs below display the same data. Examine both graphs and answer the questions below.



Favourite Subject – Graph A



Favourite Subject – Graph B



Questions

What do you not know about the data?

a) What is the scale in Graph A?

b) What is the scale in Graph B?

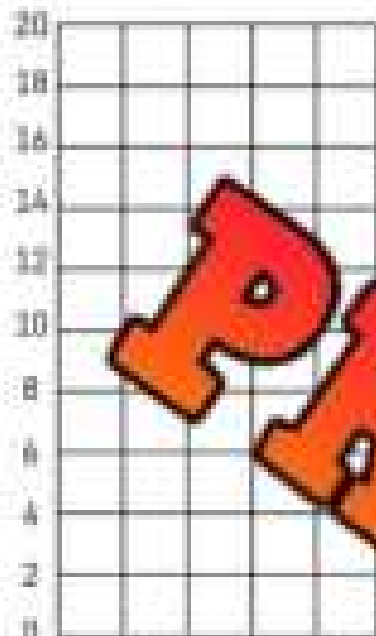
c) Which graph uses more of the space?

d) Which graph is easier to read and interpret? Why is that graph better?

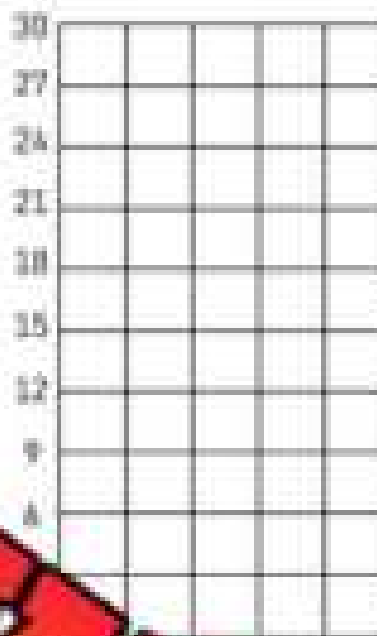
e) Why is it important to choose an appropriate scale?

Drawing Bar Graphs

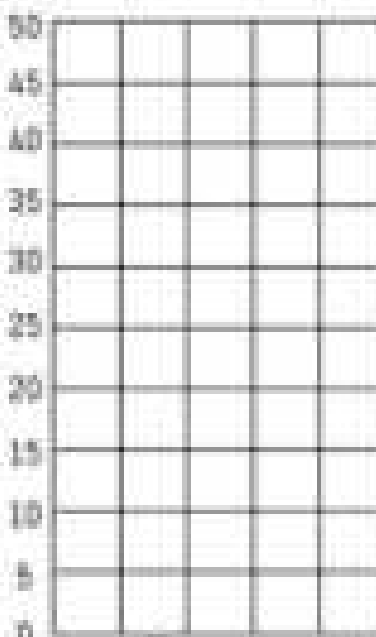
Questions Draw the bars for each of the bar graphs below



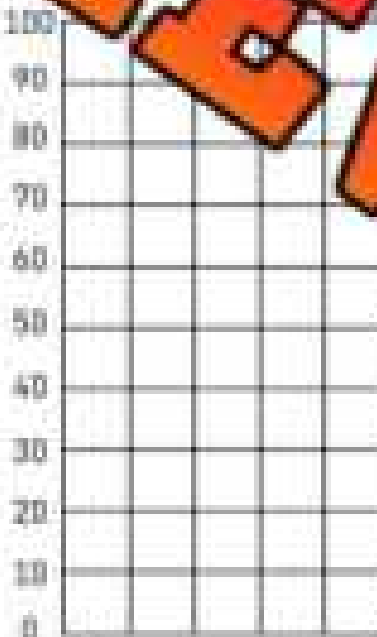
Favourite Food	# of votes
Pizza	14
Chocolate	14
Spaghetti	8
Ice Cream	4
Chicken Wings	2



Player	# of points
Jake	21
Nathan	12
Courtney	18
Ashley	28
Luke	8



Favourite Hobby	# of votes
Drawing	30
Exercising	11
Cooking	29
Reading	13
Gaming	45



Favourite Food	# of votes
Hot Dog	40
Pizza	80
Fries	75
Tacos	35
Sandwich	25

PREVIEW

Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

Draw the bars for the bar graphs below.

Fruit	Apple	Banana	Orange	Mango
Votes	20	18	15	5

Name: _____

Draw the bars for the bar graphs below.

Fruit	Apple	Banana	Orange	Mango
Votes	20	18	15	5

Name: _____

Draw the bars for the bar graphs below.

Fruit	Apple	Banana	Orange	Mango
Votes	20	18	15	5

Name: _____

Draw the bars for the bar graphs below.

Fruit	Apple	Banana	Orange	Mango
Votes	20	18	15	5



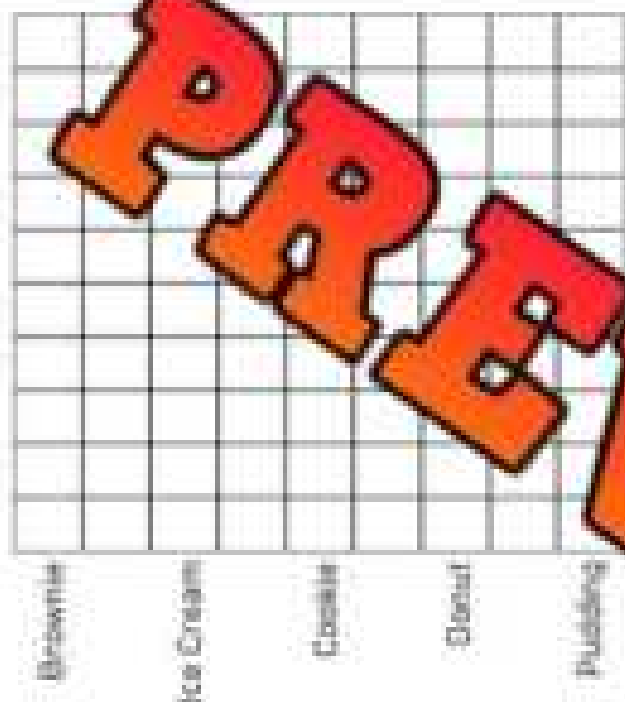
Creating Scale

When you create a scale for your graph, you need to look at the data so you can decide what to go up by. The goal is to create a graph that will fill the graph area.

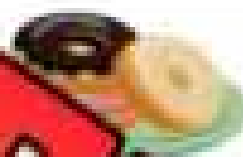
Step 1: Look at the data. Find the lowest and highest numbers.

Step 2: Count how many lines you have to plot your data.

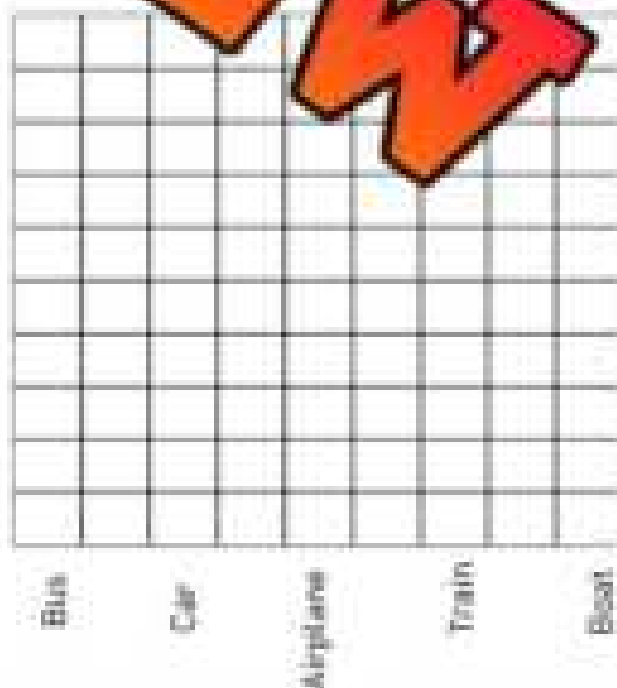
Step 3: Decide what to go up by to ensure you have enough space to plot all the data.



Favourite Dessert	# of votes
Brownie	21
Ice Cream	27
Cookie	15
Donut	12
Pudding	9



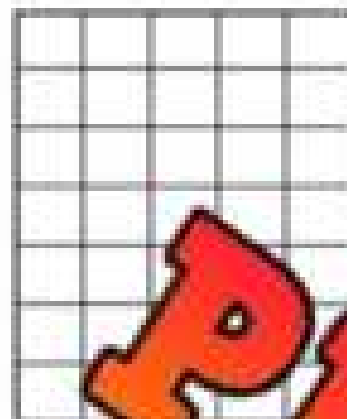
Favourite Transportation Method	# of votes
Bus	10
Car	50
Airplane	90
Train	70
Boat	80



Creating Scale

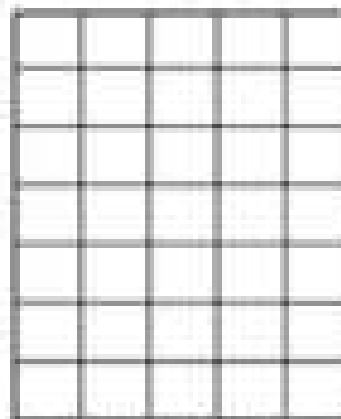
Questions

1) Read the numbers and decide which scale to use. 2) Draw your bar graphs.



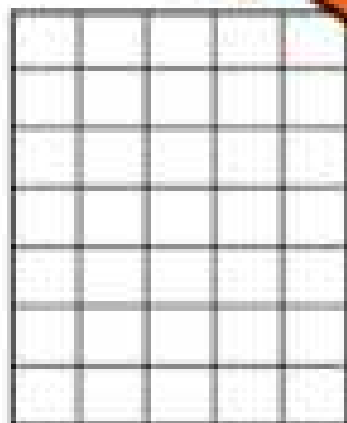
Dog
Cat
Bunny
Hamster

Pets	Votes
Dog	3
Cat	12
Bunny	18
Hamster	15
Guinea Pig	9



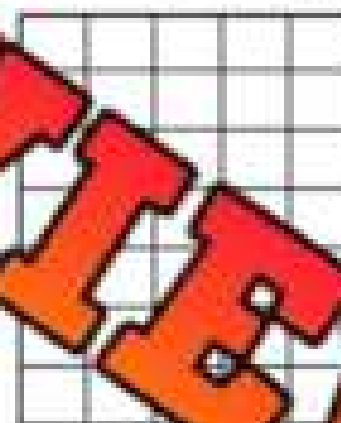
Nike
Puma
Adidas
U.A.
Reebok

Brand	Votes
Nike	10
Puma	6
Adidas	3
Under Armour	8
Reebok	12



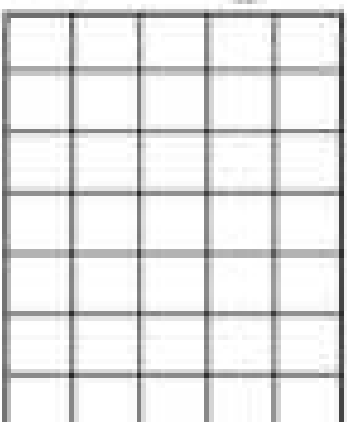
Cookies
Cake
Candy
Ice Cream
Donuts

Food	Votes
Cookies	15
Cake	20
Candy	30
Ice Cream	25
Donuts	10



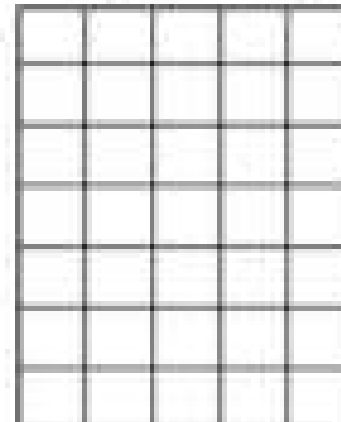
Math
Science
Gym
Art
Music

Subject	Votes
Math	8
Science	22
Gym	65
Art	41
Music	30



Honda
BMW
Toyota
Tesla
Ford

Cars	Votes
Honda	200
BMW	450
Toyota	325
Tesla	675
Ford	350



Water
Pop
O.J.
Milk
A.J.

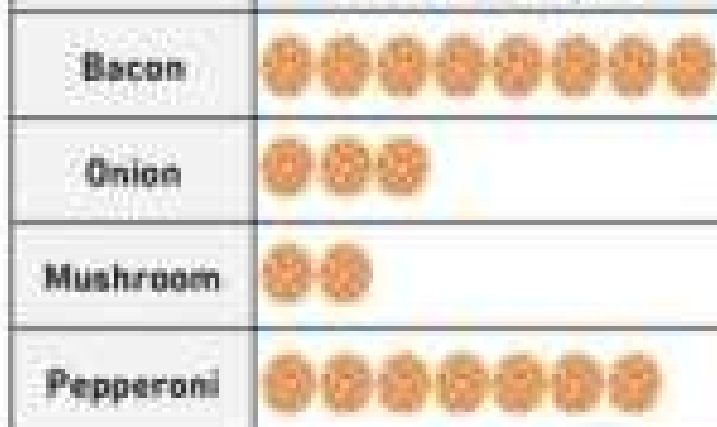
Drinks	Votes
Water	700
Pop	1200
Orange Juice	550
Milk	150
Apple Juice	825

Displaying Data Using Different Graphs

LAST 100 PIZZA TOPPINGS ORDERED - GRAPH A



Last 100 Pizza Toppings Ordered - Graph B



 = 5 toppings

Questions

Write your answers below

a) Which graph displays the data more clearly? Explain your choice.

b) If you were reading this data quickly, which graph is easier to read? Explain.

c) When do you think a bar graph is better than a pictograph?

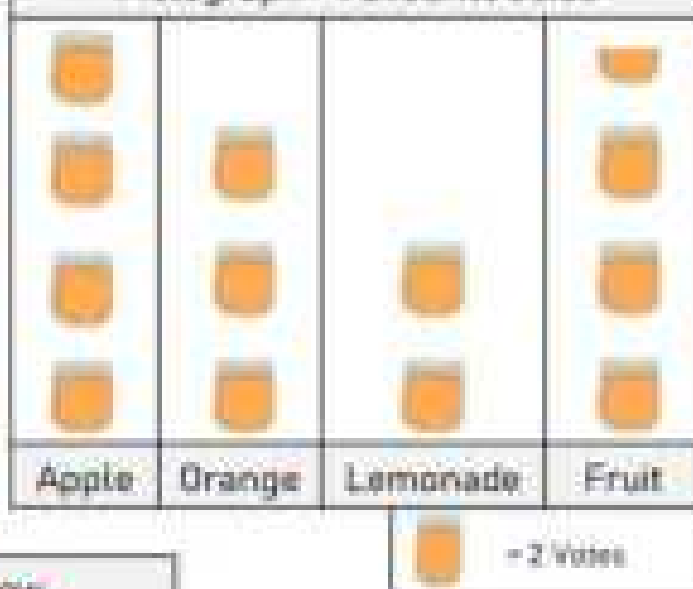
d) When do you think a pictograph is better than a bar graph?

Displaying Data Using Different Graphs

Dot Plot - Favourite Juice



Pictograph - Favourite Juice



Questions

Answer the following questions.

a) What is the difference between a dot plot and a pictograph? Which graph always uses one-to-one correspondence?

b) If you were reading this data quickly, which graph is easier to read? Explain.

c) When do you think a dot plot is better than a pictograph?

d) When do you think a pictograph is better than a dot plot?

Activity Title: Flip the Data

Objective

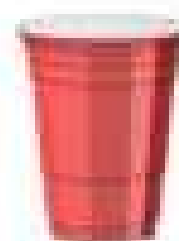
What are we learning about?

Students will engage in a fun and active game where they read data from a bar graph and answer questions to earn the opportunity to flip a bottle or cup. This activity combines data interpretation skills with a physical challenge, adding excitement and a competitive element to learning.

Materials

What you will need for the activity.

- 1 bottle or cup per group
- A smartboard (to display bar graphs)
- Timer (stopwatch or timer app)
- Question cards on bar graph data
- Scoreboard to keep track of wins



Instructions

How you will complete

1. Divide the class into small teams, ideally of 3-5 students.
2. Prepare a series of bar graphs to display on the smartboard with corresponding question cards that ask about the data.
3. One team at a time comes to the front where the graph is displayed.
4. Display the first bar graph on the smartboard.
5. The first student from the active team reads the graph and selects a question card. Start the timer when the question is first shown.
6. The student answers the question based on the data presented in the graph. The teacher checks the answer.
7. If the student answers correctly, they flip their bottle or cup repeatedly until they land it upright. When they do, the next teammate can take their turn.
8. If the student's answer is incorrect, they must try another question card before they can attempt to flip.
9. The team's turn ends either when all members have successfully flipped their bottle/cup or when the timer reaches a set limit (e.g., 3 minutes).
10. Record the team's time or number of successful flips on the scoreboard.
11. Repeat steps 4-10 for each team. The team with the fastest time wins.

Name: _____

50

Cartesian Coordinates

Graph 1

What did you learn from the graph?

Favourite Character



Graph 2

What did you learn from the graph?

Favourite Video Game



Graph 4

What did you learn from the graph?

Favourite Pet



Graph 5

What did you learn from the graph?



Questions

Choose a question to ask the student who is about to flip their bottle.

What is the title of the graph?

What is the title of the Y-axis?

What is the title of the X-axis?

What does each bar on the graph represent?

Which category has the highest value?

Which category has the lowest value?

How many bars are displayed on the graph?

What is the range of values on the Y-axis?

What is the total number of items represented by all bars?

What is the difference in value between the highest and lowest categories?

Are there any categories that have similar values to others?

How does the value of one specific category compare to others?

What could be a possible reason for the highest value?

What could be a possible reason for the lowest value?

What trends can you observe from the graph?

How might this data be useful?

If you could add another category to this graph, what would it be?

How would you describe the overall distribution of data?

What insights or conclusions can you draw from this graph?

How might the information on the graph impact decisions or opinions?

Statistical Problem-Solving Process

We can solve problems by collecting data and representing the data in a visual representation – a graph.

A problem could be an argument you had with a friend over which sport is the most popular in your class. To solve the argument, you could ask your classmates your statistical question. After you collect your data, you could graph it to clearly show your results.

The steps of the statistical problem-solving process are as follows:

- 1) Create a statistical question
- 2) Collect data
- 3) Represent the data
- 4) Reading the data



Statistical Question: Brainstorm statistical questions of interest to you

1) Think of 3 problems you could solve by collecting data from your classmates

2) Which problem will you choose? Write a statistical question for it

Directions: Fill in the table to setup for the collecting data step

Categories					
Tally					
Frequency					

Creating a Bar Graph

Use the data you collected to plot your graph. Remember the following labels:

X axis label

Y axis label

Title

Scale

Categories

PREVIEW



Name: _____

58

Language | Grammar

Creating a Dot Plot

Questions

Display your data in the dot plot

Use the data you collected to plot your graph. Remember the following labels:

Title

Categories



Name: _____

Creating a Pictograph

Questions

Display your data in the pictograph

LEGEND

■ _____

PREVIEW

Reading Your Data

Results

Read your graph(s) and answer the questions

1) What was the answer to your statistical question?

2) Were you surprised by the results? If so, what surprised you? If not, explain how you knew what the results would be.

3) What was the least popular answer?

4) What was the most popular answer?

5) How many people did you survey?

6) Which graph showed the data the best? Explain why you feel this way.

PREVIEW

Creating an Infographic

An infographic shares information about a topic in multiple ways. Infographics are great for displaying data that can teach an audience about a topic.

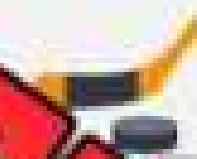
Directions

Display the data set in different ways below.

50 grade 4 students across Alberta were surveyed, asking what their favourite sport is. The results are shown in the table below.

Hockey	Basketball	Baseball	Soccer	Football
20	10	7	7	4

40% of students prefer hockey as their favourite sport



Only 2% of students prefer football as their favourite sport



Hockey	
Basketball	
Baseball	
Soccer	
Football	

Legend



= 2 votes

Unit Quiz – Statistics

Part 1

Four friends tracked their exercise minutes for one day and displayed it in the pictograph below. Fill in the frequency by reading the pictograph.

Name	Number of Exercise Minutes	Frequency
Dan		
Troy		
Bella		
Luke		

1 pair of shoes = 10 minutes

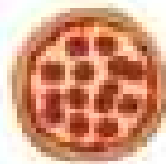
a) How many minutes did Dan exercise?

b) Who exercised the most?

c) How many total minutes did the 4 friends exercise?

Part 2

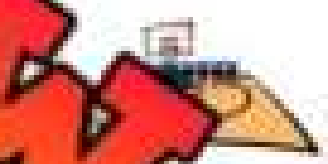
Write the scale and draw the bar graphs for each graph below.



Favourite Food	# of votes
Pizza	12
Chocolate	6
Spaghetti	9
Ice Cream	16
Chicken Wings	6

Pizza
 Chocolate
 Spaghetti
 Ice Cream
 Chicken Wings

Jake
 Nathan
 Courtney
 Ashley
 Luke



Player	# of points
Jake	15
Nathan	30
Courtney	18
Ashley	21
Luke	9

Part 3

Read the graph and answer the questions below

Mr. Wilson's class was asked what their favourite pet is. The results are graphed below.



a) Which pet was most popular?

b) How many more votes did dog get than bunny?

c) What is the scale of the graph?

d) Was dog more popular than hamster and fish together?

e) Which three pets together add up to the total number of votes dog received?

f) How many people were surveyed?

Part 4

Graph the data below in a bar graph

The grade 4s were asked which entertainment they liked the best. The results are below.

Movies	TV Shows	YouTube	Video Games	Music
9	12	21	27	15



a) Which form of entertainment was most popular?

b) How many more votes did video games get than music?

c) What scale did you choose for the graph?

d) How many students were surveyed?



Google Slides Lessons Preview





Alberta Math Curriculum Shape and Space – Grade 4

3-Part Lesson Format

Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Quotes
- And More!

Learning Goal

We are learning to use analog and digital clocks and timers to tell time in hours, minutes, and seconds so we can measure and understand time accurately in our daily activities.

Telling Time - Digital Clocks

1:05	8:33:02
4:30	11:5:55
5:20	2:51:22

Part 2 – Action!

- Writing
- Matching
- Drag and Drop
- Drawing
- And More!

Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!

Telling Time - Word Problems

11. Anna's morning lesson starts at 9:00 and after 20 minutes she has 10 minutes for her class.

12. David's lesson starts at 10:00 and lasts for 20 minutes. How long is his class?















Alberta Math Curriculum Shape and Space – Grade 4

Elapsed Time - Nearest Hour








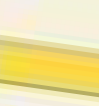







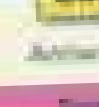


How much time has passed by the nearest hour?

1 2 3 4 5 6 7 8 9 0

  1:00 2:00 1 hour	  1:00 2:00 1 hour	  1:00 2:00 1 hour
  1:00 2:00 1 hour	  1:00 2:00 1 hour	  1:00 2:00 1 hour

Elapsed Time - Nearest Half Hour

How much time has passed by the nearest half hour?

   1:00 1:30 2:00 1 hour 30 minutes	   1:00 1:30 2:00 1 hour 30 minutes	   1:00 1:30 2:00 1 hour 30 minutes
   1:00 1:30 2:00 1 hour 30 minutes	   1:00 1:30 2:00 1 hour 30 minutes	   1:00 1:30 2:00 1 hour 30 minutes

Elapsed Time - Nearest 15 Minutes

How much time has passed by the nearest 15 minutes?

Start	End	Time	Start	End	Time
1:00	1:15	15	1:00	1:30	30
1:00	1:30	30	1:00	2:00	60
1:00	1:45	45	1:00	2:15	75
1:00	2:00	60	1:00	2:30	90
1:00	2:15	75	1:00	3:00	120

15 minutes after 1:00 is 1:15
 30 minutes after 1:00 is 1:30
 45 minutes after 1:00 is 1:45
 60 minutes after 1:00 is 2:00



Alberta Math Curriculum Shape and Space – Grade 4

1 2 3 4 5 **Measuring in Centimeters** 6 7 8 9 0

Use your measuring tool to measure the length of the rectangles below. Record the length in centimeters.

Use your measuring tool to find the perimeter of the rectangles below. Record the perimeter in centimeters.

Use your measuring tool to measure the length and width of the rectangles below. Record the length and width in centimeters.

1 2 3 4 5 6 7 8 9 0



Workbook Preview





Grade 4 Geometry



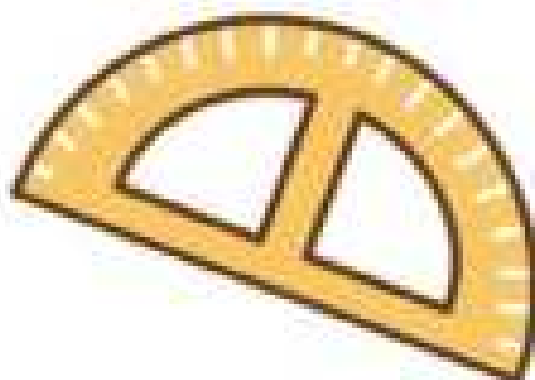
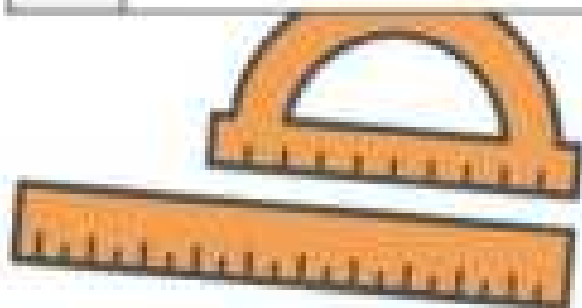
	Curriculum Expectations	Pages
6.1	<p>Students analyze and explain geometric properties</p> <ul style="list-style-type: none">Identify relationships between the sides of a polygon, including parallel, equal length, or perpendicular, by measuring.Identify relationships between angles at vertices of a polygon, including equal, supplementary, and complementary, by measuring. <p>Preview of 130 pages from this product that contains 406 pages total.</p> <ul style="list-style-type: none">Classify quadrilaterals in a hierarchy according to geometric properties.Show, using geometric properties, that a close approximation of a polygon is not the same as the polygon.Verify geometric properties of polygons by translating, rotating, or reflecting using hands-on materials or digital applications.	- 64, 9 - 107
TQ	Tests and Quizzes	65 - 67, 108 - 109





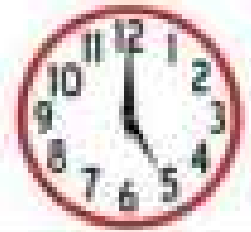
Grade 4 Measurement

	Curriculum Expectations	Pages
M.1	<p>Students interpret and express area.</p> <ul style="list-style-type: none"> • Model area by dragging a length using hands-on materials or digital applications. • Recognize the rearrangement of area in First Nations, Métis, or Inuit design. • Compare non-standard units that tile to non-standard units that do not tile. • Measure area with non-standard units by tiling. • Measure area with standard units by tiling with square centimetres. • Visualize and model the area of various rectangles as two-dimensional arrays of square shaped units. • Determine the area of a rectangle using multiplication. • Solve problems involving area of rectangles. 	<p>11 - 151, 154 - 171</p>
TQ	Tests and Quizzes	<p>152 - 153, 172 - 173</p>





Grade 4 Time



	Curriculum Expectations	Pages
T.1	<p>Students communicate duration with standard units of time.</p> <ul style="list-style-type: none">• Relate durations of 15 minutes, 20 minutes, 30 minutes, 40 minutes, and 45 minutes to fractions of a circle.• Express time of day using fractions.• Determine duration in minutes using a clock.• Apply addition and subtraction strategies to the calculation of duration.• Convert between hours, minutes, and seconds.• Compare the duration of events using standard units.• Solve problems involving duration.	174 - 121
TQ	Tests and Quizzes	222 - 223



Regular vs Irregular Polygons

Regular


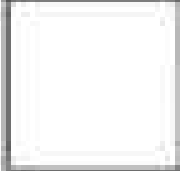
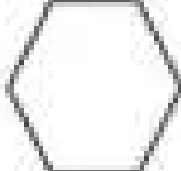
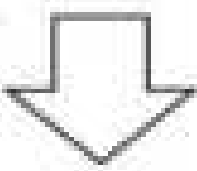



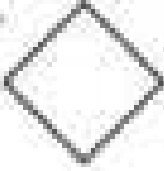
Regular Polygons

- All sides are the same length
- All angles are the same

Irregular

Part 1

Label the polygons regular or irregular

1. 	3. 	4. 	5. 
6. 	7. 	9. 	10. 

Part 2

Draw regular and irregular polygons

1)	2)	3)	4)	
Regular	Regular	Regular	Regular	Regular
6)	7)	8)	9)	10)
Irregular	Irregular	Irregular	Irregular	Irregular


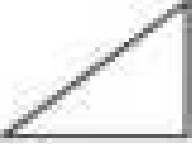






Vertices

Vertices are where two sides meet. The vertices of a shape are the corners.



Part 1

Circle the vertices and write how many vertices the shape has.

1.  _____	3.  _____	4.  _____	5.  _____
6.  _____	7.  _____	8.  _____	10.  _____

Part 2

Draw a shape with the correct number of vertices.

1) 	2) 	3) 	4)
3	4	5	6

What do you notice about the number of vertices and sides that a shape has?

Naming Angles



Obtuse
Larger than right angle



right angle
90 degrees

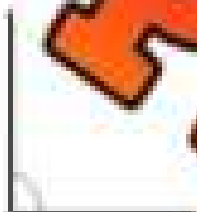


Acute
Smaller than right angle

Questions

Label the angles acute, right or obtuse

1)



2)



3)



4)

5)



6)



7)



8)

9)



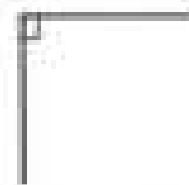
10)



11)



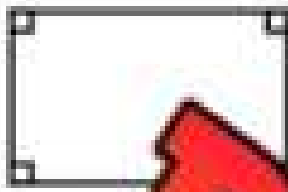
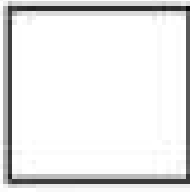
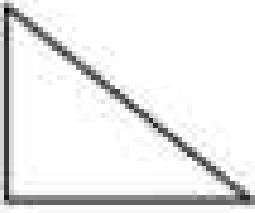

12)



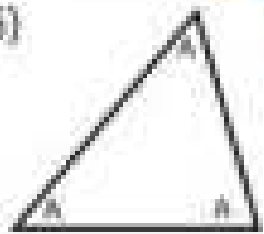

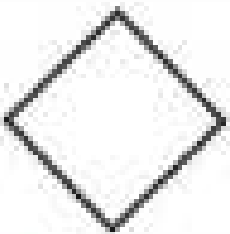
PREVIEW

Angles in Triangles and Rectangles

Part 1 Label the right angles with a small square and write how many right angles there are

1) 	2) 	3) 	4) 

Part 2 Label acute (A), obtuse (O) or right (R) inside the shapes below

5) 	6) 	7) 
Acute = 3	Acute =	Acute =
Obtuse = 0	Obtuse =	Obtuse =
Right = 0	Right =	Right =

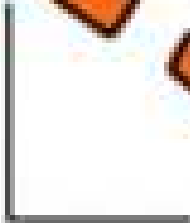


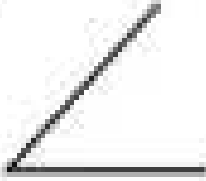


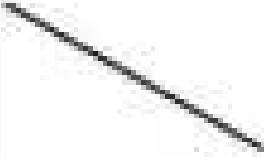
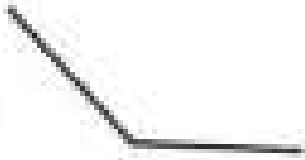

Part 3 Draw a picture of a shape with the number of angles it shows

9)	10)	11)	12)
Triangle	Triangle	Rectangle	Triangle
Acute = 2	Acute = 3	Acute = 0	Acute = 2
Obtuse = 1	Obtuse = 0	Obtuse = 0	Obtuse = 0
Right = 0	Right = 0	Right = 4	Right = 1

Naming Angles – Right, Obtuse, Acute, and Straight

Right Angle - 90° angle	Acute Angle - smaller than 90° angle	Obtuse Angle - larger than 90° angle	Straight Angle - A straight line
			

Question: Label the angle - straight, acute, obtuse, or right.

1) 	3) 	4) 	
5) 	6) 		
9) 	10) 	11) 	12) 

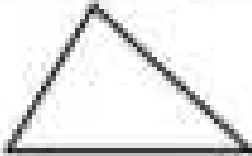


Finding Obtuse, Acute, Straight, and Right Angles




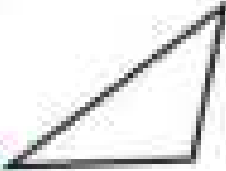

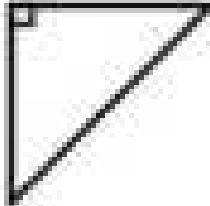

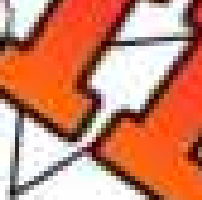

Questions: What are the names of the angles with a letter - Straight, Acute, Obtuse, or Right?

Letters	Name of Angle	Name of Angle
A		
B		
C		K
D		L
E		M
F		N
G		O
H		P

Acute, Obtuse, and Right Triangles

Acute Triangle	Right Triangle	Obtuse Triangle
		
All Angles are Less Than 90°	1 Angle is 90°	1 Angle is Greater Than 90°



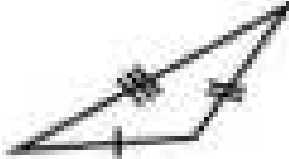
Part 1 Classify the triangles below using the line provided

1) 	3) 	4) 
5) 	6) 	7) 
8) 		


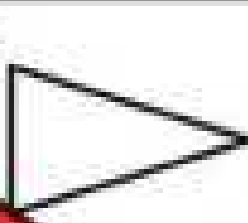
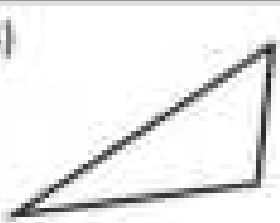
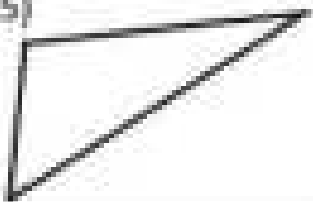
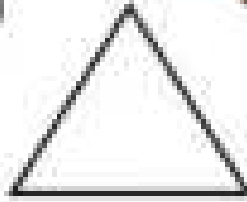
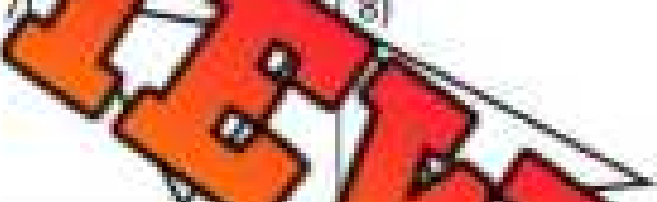
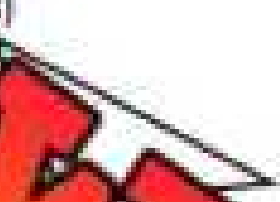
Part 2 Draw the angles below

9)	10)	11)
Acute Triangle	Obtuse Triangle	Right Triangle

Types of Triangles – Equilateral, Scalene, Isosceles

Equilateral Triangle	Isosceles Triangle	Scalene Triangle
		
3 Equal Sides 3 Equal Angles	2 Equal Sides 2 Equal Angles	No Equal Sides No Equal Angles

Part 1 Identify the triangles as equilateral, isosceles, or scalene

1) 	3) 	4) 
5) 	6) 	7) 
8) 		

Part 2 Draw a picture of the three different types of triangles

9)	10)	11)
Equilateral Triangle	Isosceles Triangle	Scalene Triangle



Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class

Name: _____

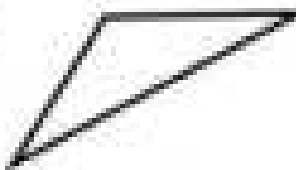
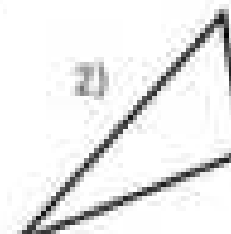
1) Circle the obtuse angles in the obtuse triangles below

1)  2) 

2) One angle is 126° and the other two angles are 27° . Is the triangle an acute, obtuse, or a right triangle?

Name: _____

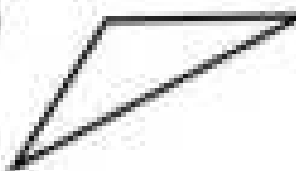
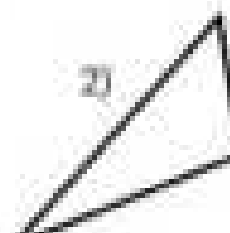
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1)  2) 

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Name: _____

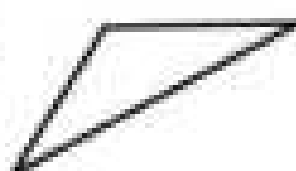

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1)  2) 

2) One angle is 126° and the other two angles are 27° . Is the triangle an acute, obtuse, or a right triangle?

Name: _____

1) Circle the obtuse angles in the obtuse triangles below

1)  2) 

2) One angle is 126° and the other two angles are 27° . Is the triangle an acute, obtuse, or a right triangle?


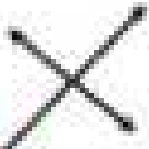


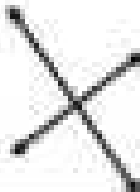



PREVIEW

Parallel, Perpendicular and Intersecting Lines











Part 1

Label the lines parallel, perpendicular, or intersecting

1) 	2) 	3) 	4) 
5) 	6) 	7) 	8) 


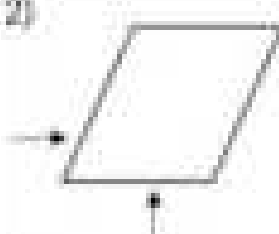
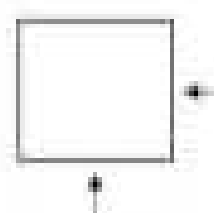
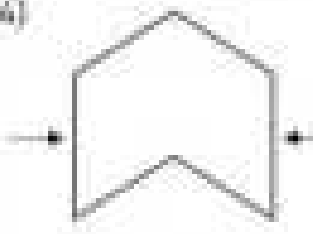


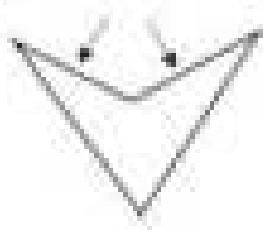
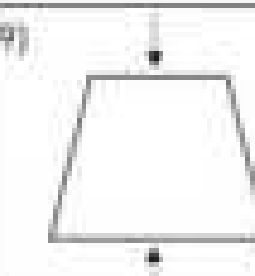
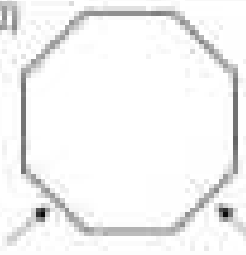


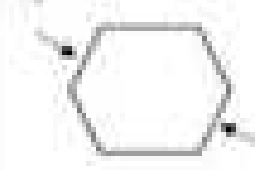
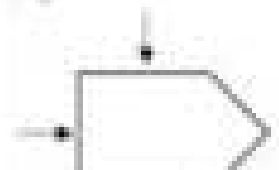

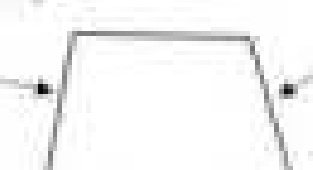
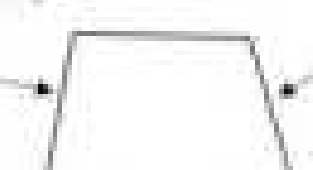
Part 2

Draw a second line that is intersecting, perpendicular, or parallel to the other line

1)  Perpendicular	2)  Parallel	3)  Intersecting	4)  Parallel
5)  Intersecting	6)  Perpendicular	7)  Intersecting	8)  Parallel

Parallel, Perpendicular and Intersecting Lines in Shapes**Instructions**

What is the relationship between the two lines with the arrows?

1) 	2) 	3) 	4) 
5) 	6) 	7) 	
8) 	9) 	10) 	
11) 	12) 	13) 	14) 
15) 	16) 		

PREVIEW

Quadrilaterals

Trapezium



One pair of parallel sides

Trapezoid



Two sides are parallel

Parallelogram



Two pairs of parallel sides

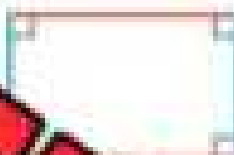


Rhombus



Two pairs of adjacent sides are of equal length

Rectangle



Right

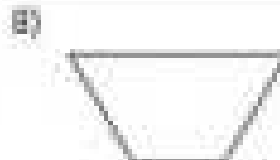
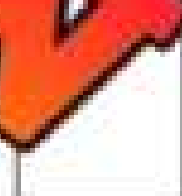
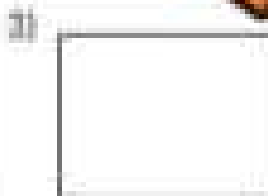
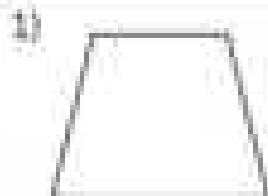
Square



All four sides are of equal length

Directions

Write the names of the quadrilaterals.



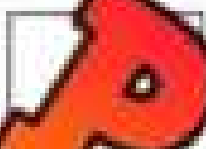
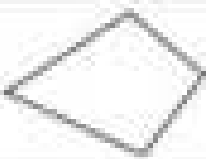




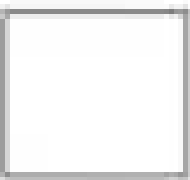

Quadrilaterals - Lines

Word Bank

Kite Trapezoid Parallelogram Rectangle Rhombus Square

Practice

1. Label the quadrilaterals using the word bank (can be used twice)
2. How many pairs of perpendicular, intersecting, and parallel lines are there?

1) 	2) 	3) 
Name: _____	Name: _____	Name: _____
Perpendicular Lines: _____	Perpendicular Lines: _____	Perpendicular Lines: _____
Parallel Lines: _____	Parallel Lines: _____	Parallel Lines: _____
Intersecting Lines: _____	Intersecting Lines: _____	Intersecting Lines: _____
4) 	5) 	6) 
Name: _____	Name: _____	Name: _____
Perpendicular Lines: _____	Perpendicular Lines: _____	Perpendicular Lines: _____
Parallel Lines: _____	Parallel Lines: _____	Parallel Lines: _____
Intersecting Lines: _____	Intersecting Lines: _____	Intersecting Lines: _____
7) 	8) 	9) 
Name: _____	Name: _____	Name: _____
Perpendicular Lines: _____	Perpendicular Lines: _____	Perpendicular Lines: _____
Parallel Lines: _____	Parallel Lines: _____	Parallel Lines: _____
Intersecting Lines: _____	Intersecting Lines: _____	Intersecting Lines: _____

Name: _____

30

Maths and Geometry
6.1

Quadrilateral Art Challenge

Draw

Follow the instructions below



Draw a boat using a trapezoid for the hull, a parallelogram for sails, and rectangles for masts. Label all the quadrilaterals.

PREVIEW

Quadrilaterals - Angles

Word Bank

Kite

Trapezoid

Parallelogram

Rectangle

Rhombus

Square

Practice

1. Label the quadrilaterals using the word bank (can be used twice).
2. Label the angles right (R), obtuse (O), reflex (Re) or acute (A)

1)



2)



3)



Name:

Name:

Name:

of Acute = 1

of Acute =

of Acute =

of Obtuse = 2

of Obtuse =

of Obtuse =

of Right = 1

of Right =

of Right =

of Reflex = 0

of Reflex =

of Reflex =

4)



5)



6)



Name:

Name:

Name:

of Acute =

of Acute =

of Acute =

of Obtuse =

of Obtuse =

of Obtuse =

of Right =

of Right =

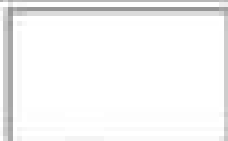
of Right =

of Reflex =

of Reflex =

of Reflex =

7)



8)



9)



Name:

Name:

Name:

of Acute =

of Acute =

of Acute =

of Obtuse =

of Obtuse =

of Obtuse =

of Right =

of Right =

of Right =

of Reflex =

of Reflex =

of Reflex =

Diagonals

A diagonal is a line segment that links 2 non-adjacent vertices of a polygon. This means it is a line that connects two corners that are not beside each other.



A rectangle has 2 diagonals



A pentagon has 5 diagonals

Part 1 How many diagonal lines do the polygons have? Draw them and write the number

1)	3)	4)	
5)	6)	8)	
9)	10)	11)	

Part 2 Draw a polygon with the specified number of diagonals

13) 9	14) 0	15) 14

Diagonals

Diagonals can be categorized based on the following:



Whether they are of equal length







Whether they intersect at their midpoint





Whether they intersect at right angles





Part 1 Do the diagonals have equal length?

1) 	2) 	3) 	4) 
Yes No	Yes No	Yes No	Yes No

Part 2 Do the diagonals intersect at their midpoint?

5) 	6) 	7) 	8) 
Yes No	Yes No	Yes No	Yes No

Part 3 Do the diagonals intersect at right angles?

9) 	10) 	11) 	12) 
Yes No	Yes No	Yes No	Yes No

Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class

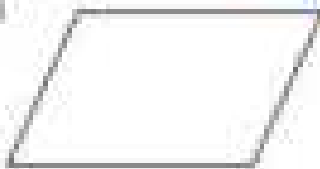
Name: _____

How many diagonal lines do the polygons have? Draw them and write the number.

1)



2)



Name: _____

How many diagonal lines do the polygons have? Draw them and write the number.

1)



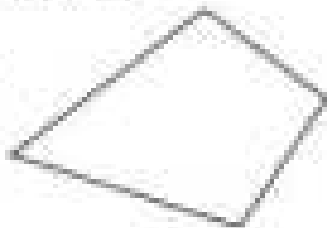
2)



Name: _____

How many diagonal lines do the polygons have? Draw them and write the number.

1)



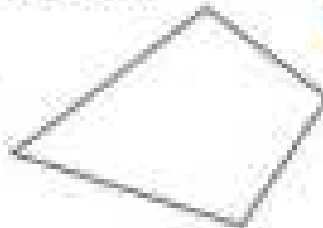
2)



Name: _____

How many diagonal lines do the polygons have? Draw them and write the number.

1)



2)




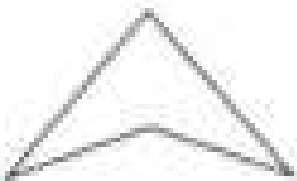

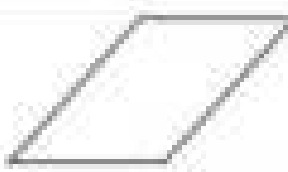
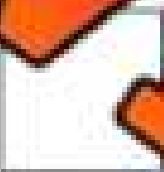
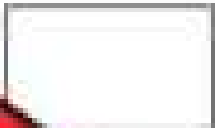



Quadrilaterals - Diagonals

Word Bank

Kite Trapezoid Parallelogram Rectangle Rhombus Square

Practice

1. Label the quadrilaterals using the word bank (can be used twice)
2. Draw the diagonal lines on the quadrilaterals and answer the questions

1) 	2) 	3) 
Name: _____	Name: _____	Name: _____
Intersect at Midpoint? <input type="checkbox"/> Y <input type="checkbox"/> N	Intersect at Midpoint? <input type="checkbox"/> Y <input type="checkbox"/> N	Intersect at Midpoint? <input type="checkbox"/> Y <input type="checkbox"/> N
Intersect at Right Angle? <input type="checkbox"/> Y <input type="checkbox"/> N	Intersect at Right Angle? <input type="checkbox"/> Y <input type="checkbox"/> N	Intersect at Right Angle? <input type="checkbox"/> Y <input type="checkbox"/> N
Diagonals Same Length? <input type="checkbox"/> Y <input type="checkbox"/> N	Diagonals Same Length? <input type="checkbox"/> Y <input type="checkbox"/> N	Diagonals Same Length? <input type="checkbox"/> Y <input type="checkbox"/> N
4) 	5) 	6) 
Name: _____	Name: _____	Name: _____
Intersect at Midpoint? <input type="checkbox"/> Y <input type="checkbox"/> N	Intersect at Midpoint? <input type="checkbox"/> Y <input type="checkbox"/> N	Intersect at Midpoint? <input type="checkbox"/> Y <input type="checkbox"/> N
Intersect at Right Angle? <input type="checkbox"/> Y <input type="checkbox"/> N	Intersect at Right Angle? <input type="checkbox"/> Y <input type="checkbox"/> N	Intersect at Right Angle? <input type="checkbox"/> Y <input type="checkbox"/> N
Diagonals Same Length? <input type="checkbox"/> Y <input type="checkbox"/> N	Diagonals Same Length? <input type="checkbox"/> Y <input type="checkbox"/> N	Diagonals Same Length? <input type="checkbox"/> Y <input type="checkbox"/> N
7) 	8) 	9) 
Name: _____	Name: _____	Name: _____
Intersect at Midpoint? <input type="checkbox"/> Y <input type="checkbox"/> N	Intersect at Midpoint? <input type="checkbox"/> Y <input type="checkbox"/> N	Intersect at Midpoint? <input type="checkbox"/> Y <input type="checkbox"/> N
Intersect at Right Angle? <input type="checkbox"/> Y <input type="checkbox"/> N	Intersect at Right Angle? <input type="checkbox"/> Y <input type="checkbox"/> N	Intersect at Right Angle? <input type="checkbox"/> Y <input type="checkbox"/> N
Diagonals Same Length? <input type="checkbox"/> Y <input type="checkbox"/> N	Diagonals Same Length? <input type="checkbox"/> Y <input type="checkbox"/> N	Diagonals Same Length? <input type="checkbox"/> Y <input type="checkbox"/> N

Quadrilaterals - Trapezoids

A trapezoid has at least one pair of parallel sides.



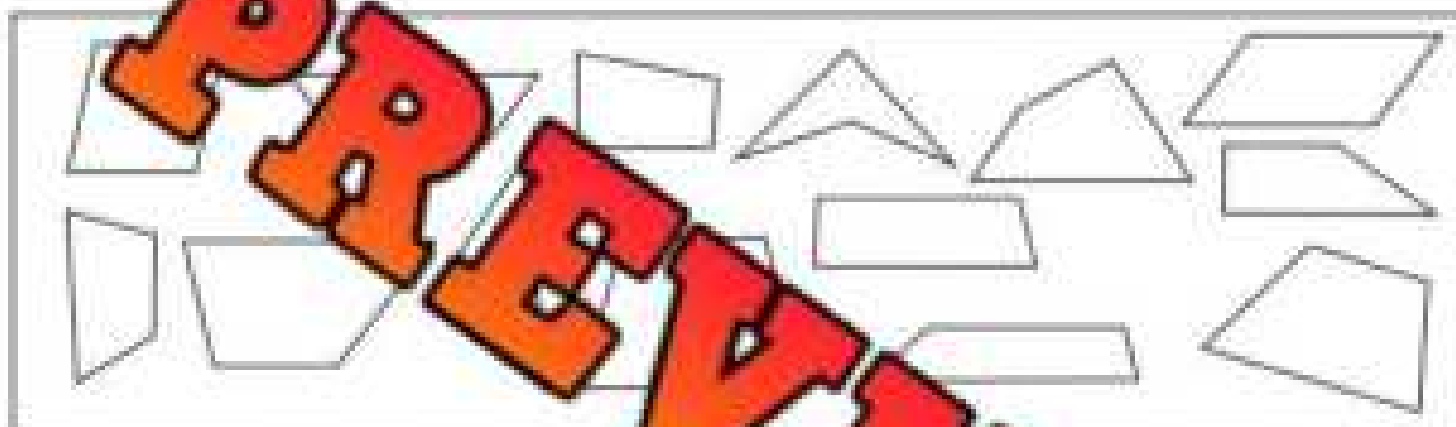
2 pairs of parallel lines



1 pair of parallel lines

This means parallelograms, rectangles, and squares are all considered trapezoids.

Part 1 Circle the trapezoids in the collection of quadrilaterals below.

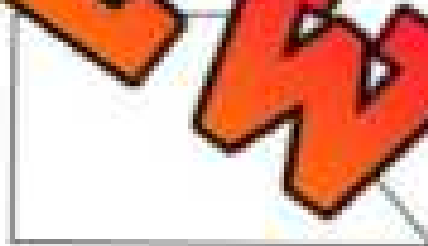


Part 2 Describe the trapezoids below using the terms parallel lines.

1)



2)



Intersect at Midpoint? Y / N

Intersect at Midpoint? Y / N

Intersect at Right Angle? Y / N

Intersect at Right Angle? Y / N

Diagonals Same Length? Y / N

Diagonals Same Length? Y / N

Circle the parallel lines above.

Circle the parallel lines above.

How many sides does the trapezoid have?

How many sides does the trapezoid have?

Quadrilaterals - Parallelogram

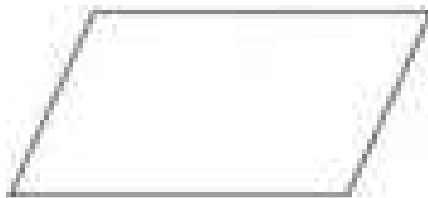

A parallelogram is a trapezoid with two pairs of parallel sides and congruent opposite sides.

Parallelogram  Rectangle  Rhombus  Square 

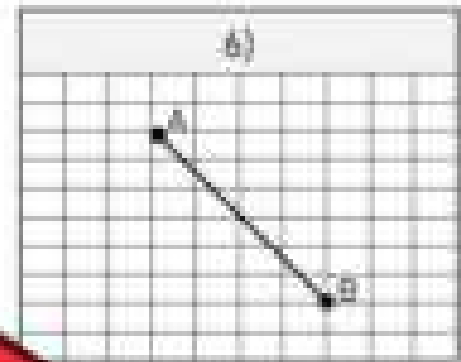
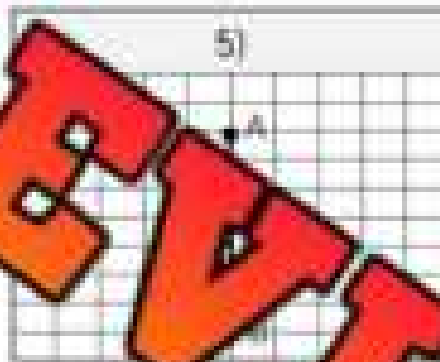
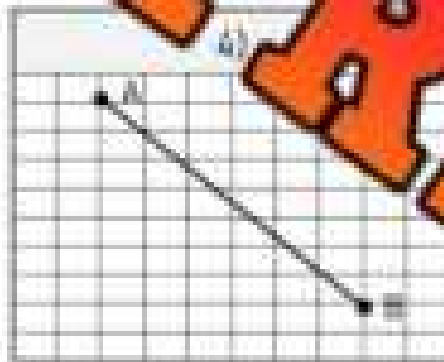
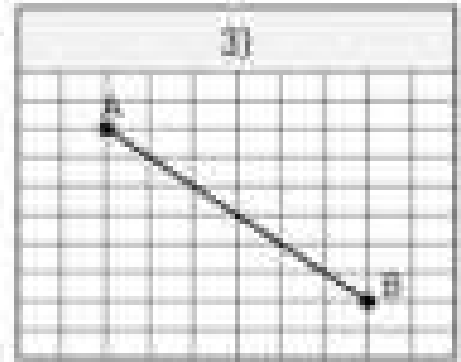
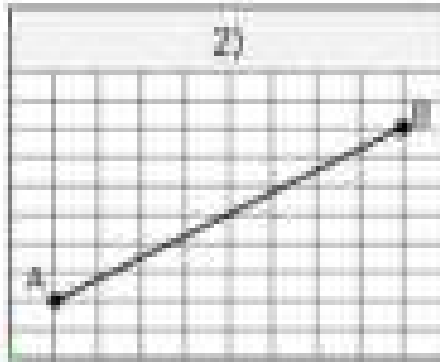
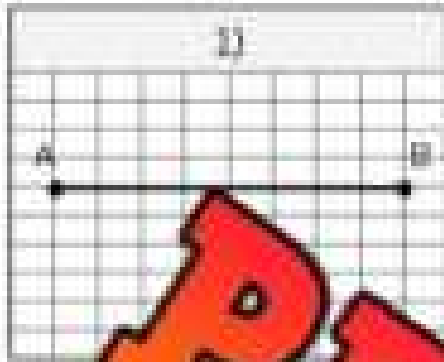
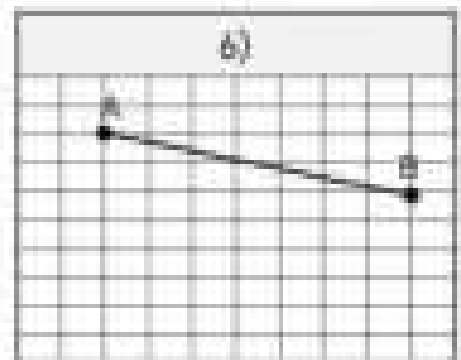
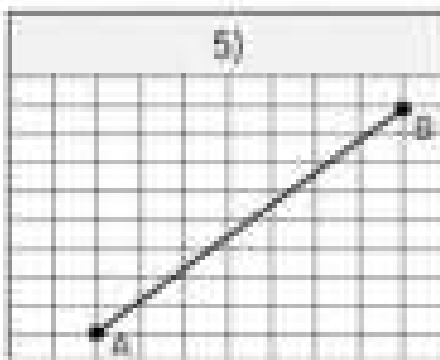
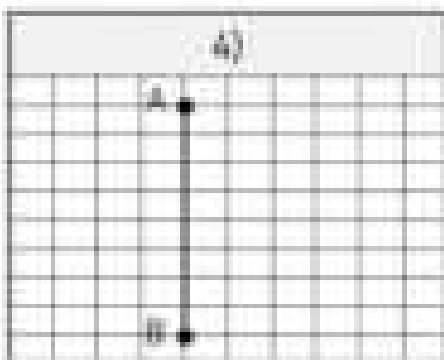
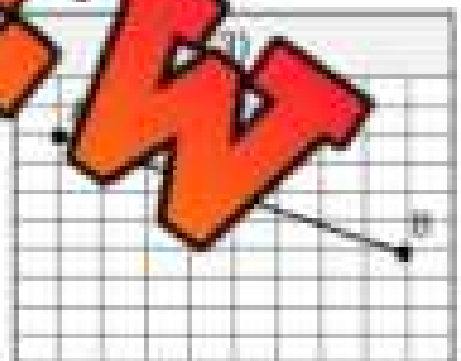
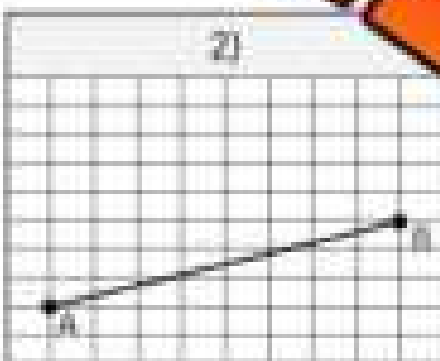
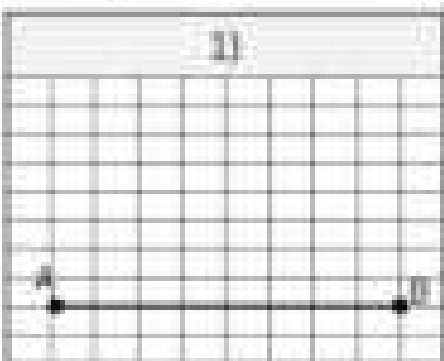
Part 1 Colour or circle the parallelograms in the collection of polygons below



Part 2 Describe the parallelograms below in their own properties

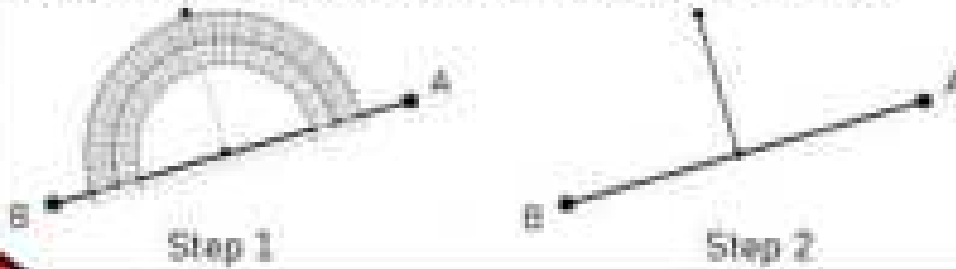
1)		2)	
Intersect at Midpoint?	Y N	Intersect at Midpoint?	Y N
Intersect at Right Angle?	Y N	Intersect at Right Angle?	Y N
Diagonals Same Length?	Y N	Diagonals Same Length?	Y N
Circle the parallel lines		Circle the parallel lines	
Put a square on the intersecting lines		Put a square on the intersecting lines	

Perpendicular and Parallel Line Segments

Part 1Construct perpendicular lines of the line segments \overline{AB} .**Part 2**Construct parallel lines of the line segments \overline{AB} .

Perpendicular and Parallel Line Segments

Example - perpendicular line of the line segment \overline{AB}



Questions

Construct perpendicular lines of the line segments \overline{AB}

1)

A

B

2)

A

B

3)

A

B

4)

A

B

5)

A

B

6)

A

B

7)

B

A

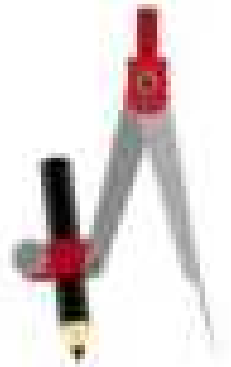
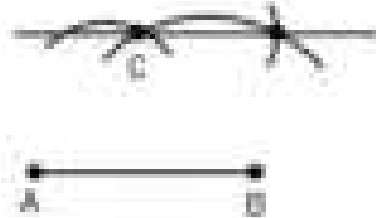
8)

A

B

Parallel Line Segments

Use a compass to draw an arc from points A, B, and C.



Questions

Construct parallel lines of the line segments AB.

1)



2)



3)



6)



5)



PREVIEW

Complementary Angles

Complementary Angles are two angles that add up to 90° . Therefore, the angles 40° and 50° are complementary angles because they add up to 90° . Together, complementary angles add up to make a right angle.

Example:

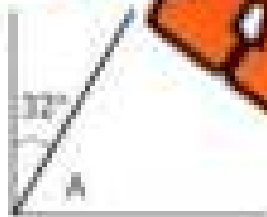


We can determine the missing complementary angle by subtracting the known angle from 90.



Practice Find the complementary angles.

1)



$$\angle A = \underline{\quad}^\circ$$

3)



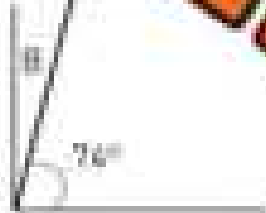
$$\angle C = \underline{\quad}^\circ$$

4)



$$\angle A = \underline{\quad}^\circ$$

5)



$$\angle B = \underline{\quad}^\circ$$

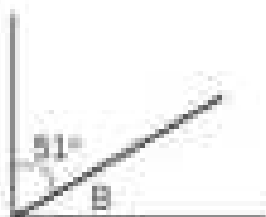
$$\angle C = \underline{\quad}^\circ$$

7)



$$\angle A = \underline{\quad}^\circ$$

8)



$$\angle B = \underline{\quad}^\circ$$

9)



$$\angle C = \underline{\quad}^\circ$$

Supplementary Angles

Supplementary Angles are two angles that add up to 180° . You will notice that two supplementary angles make a straight angle of 180° .

Example:



We can determine the missing supplementary angle by subtracting the known angle from 180.



Practice finding the supplementary angles.



$$\angle A = \underline{\hspace{2cm}}^\circ$$



$$\angle C = \underline{\hspace{2cm}}^\circ$$



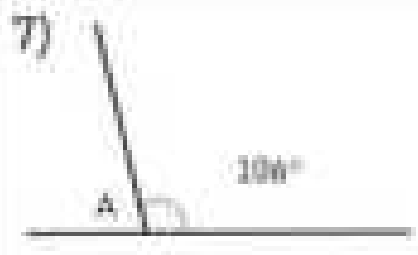
$$\angle A = \underline{\hspace{2cm}}^\circ$$



$$\angle B = \underline{\hspace{2cm}}^\circ$$



$$\angle C = \underline{\hspace{2cm}}^\circ$$



$$\angle A = \underline{\hspace{2cm}}^\circ$$



$$\angle B = \underline{\hspace{2cm}}^\circ$$




$$\angle C = \underline{\hspace{2cm}}^\circ$$


Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____


Determine the supplementary angles

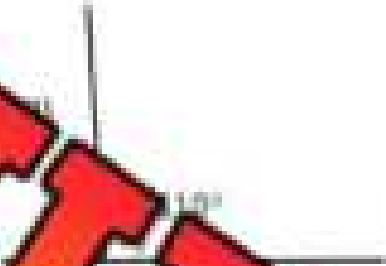
A)  $\angle R = \underline{\hspace{2cm}}^\circ$

B)  $\angle C = \underline{\hspace{2cm}}^\circ$

Name: _____


Determine the supplementary angles


A)  $\angle R = \underline{\hspace{2cm}}^\circ$

B)  $\angle C = \underline{\hspace{2cm}}^\circ$

Name: _____


Determine the supplementary angles


A)  $\angle R = \underline{\hspace{2cm}}^\circ$

B)  $\angle C = \underline{\hspace{2cm}}^\circ$

Name: _____

Determine the supplementary angles

A)  $\angle R = \underline{\hspace{2cm}}^\circ$

B)  $\angle C = \underline{\hspace{2cm}}^\circ$

PREVIEW

Complementary and Supplementary Angles

Part 1 Analyze the angles below. Are they complimentary, supplementary or neither?

1)



Original Angle

41°	141°	41°

Original Angle

28°	118°	

2)



Original Angle

158°	59°	148°

Part 2 Fill in the table by writing in the complementary and supplementary angles:

Angle	Supplementary	Complementary
12°		
64°		
81°		

Angle	Supplementary	Complementary
74°		
26°		
59°		

Complementary and Supplementary Angles

Part 1

Write the complementary angle for each angle below.

#	Angle	Complementary
1	34°	
2	54°	
3		
4		

#	Angle	Complementary
5	31°	
6	74°	
7	87°	
8	25°	

Part 2

Are the given pairs of angles complementary? Yes or No?

#	Pair	Yes/No
1	$33^\circ, 57^\circ$	
2	$64^\circ, 36^\circ$	
3	$118^\circ, 62^\circ$	

#	Pair	Yes/No
4	$34^\circ, 56^\circ$	
5	$66^\circ, 34^\circ$	
6	19°	

Part 3

Write the supplementary angle.

#	Angle	Supplementary
1	143°	
2	151°	
3	137°	
4	112°	

#	Angle	Supplementary
5	92°	
6	165°	
7	103°	
8	114°	

Part 4

Are the given pairs of angles supplementary? Yes or No?

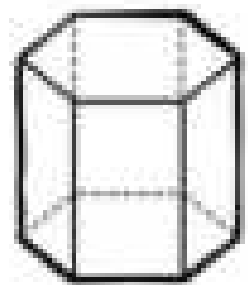
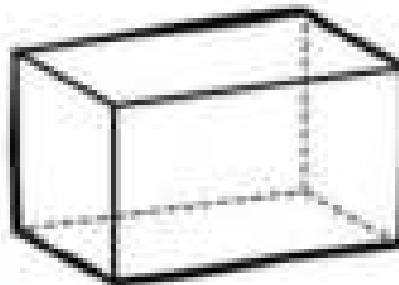
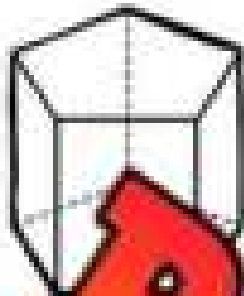
#	Pair	Yes/No
1	$134^\circ, 56^\circ$	
2	$47^\circ, 33^\circ$	
3	$112^\circ, 82^\circ$	

#	Pair	Yes/No
4	$166^\circ, 14^\circ$	
5	$58^\circ, 112^\circ$	
6	$123^\circ, 47^\circ$	

3D Objects - Prisms

Questions

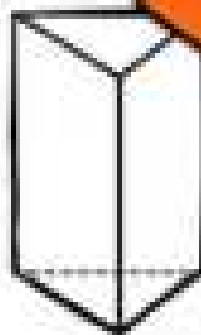
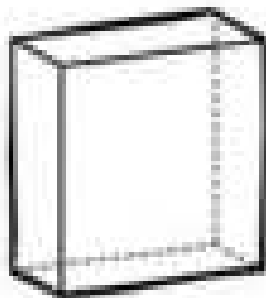
Fill in the tables below based on the prisms



Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	



Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

PREVIEW

Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class.

Name: _____

Fill in the blanks about the objects.



Faces: _____

Faces: _____

Edges: _____

Edges: _____

Vertices: _____

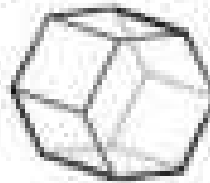
Vertices: _____

Name: _____

Name: _____

Name: _____

Fill in the blanks about the objects.



Faces: _____

Faces: _____

Edges: _____

Edges: _____

Vertices: _____

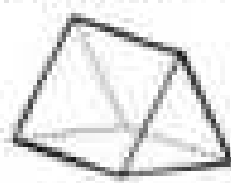
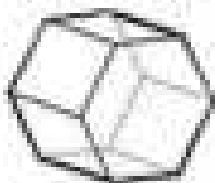
Vertices: _____

Name: _____

Name: _____

Name: _____

Fill in the blanks about the objects.



Faces: _____

Faces: _____

Edges: _____

Edges: _____

Vertices: _____

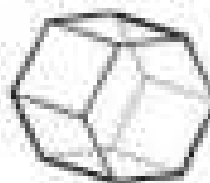
Vertices: _____

Name: _____

Name: _____

Name: _____

Fill in the blanks about the objects.



Faces: _____

Faces: _____

Edges: _____

Edges: _____

Vertices: _____

Vertices: _____

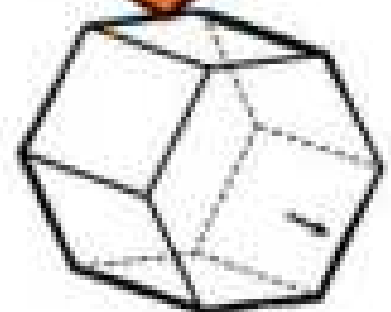
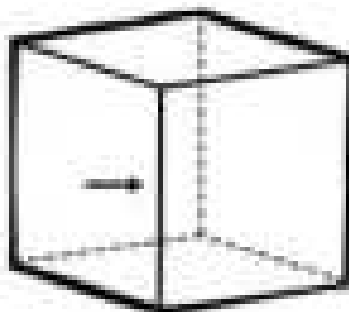
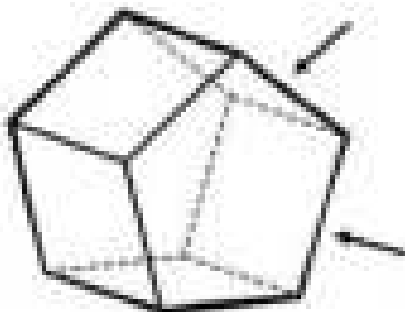
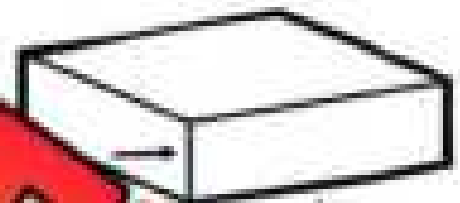
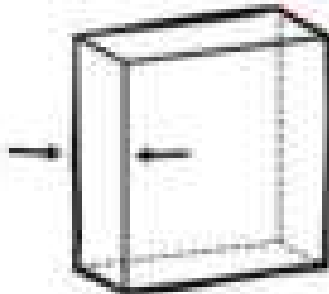
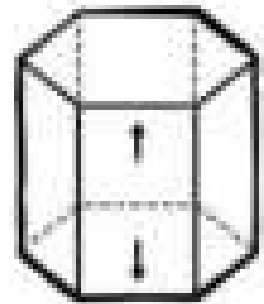
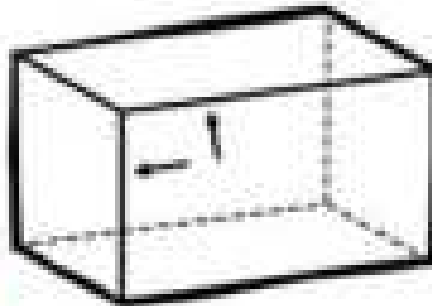
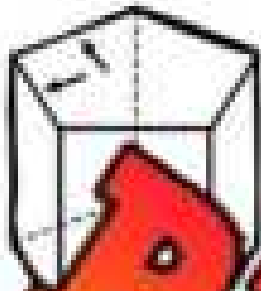
Name: _____

Name: _____

Lines in 3D Objects - Prisms

Instructions

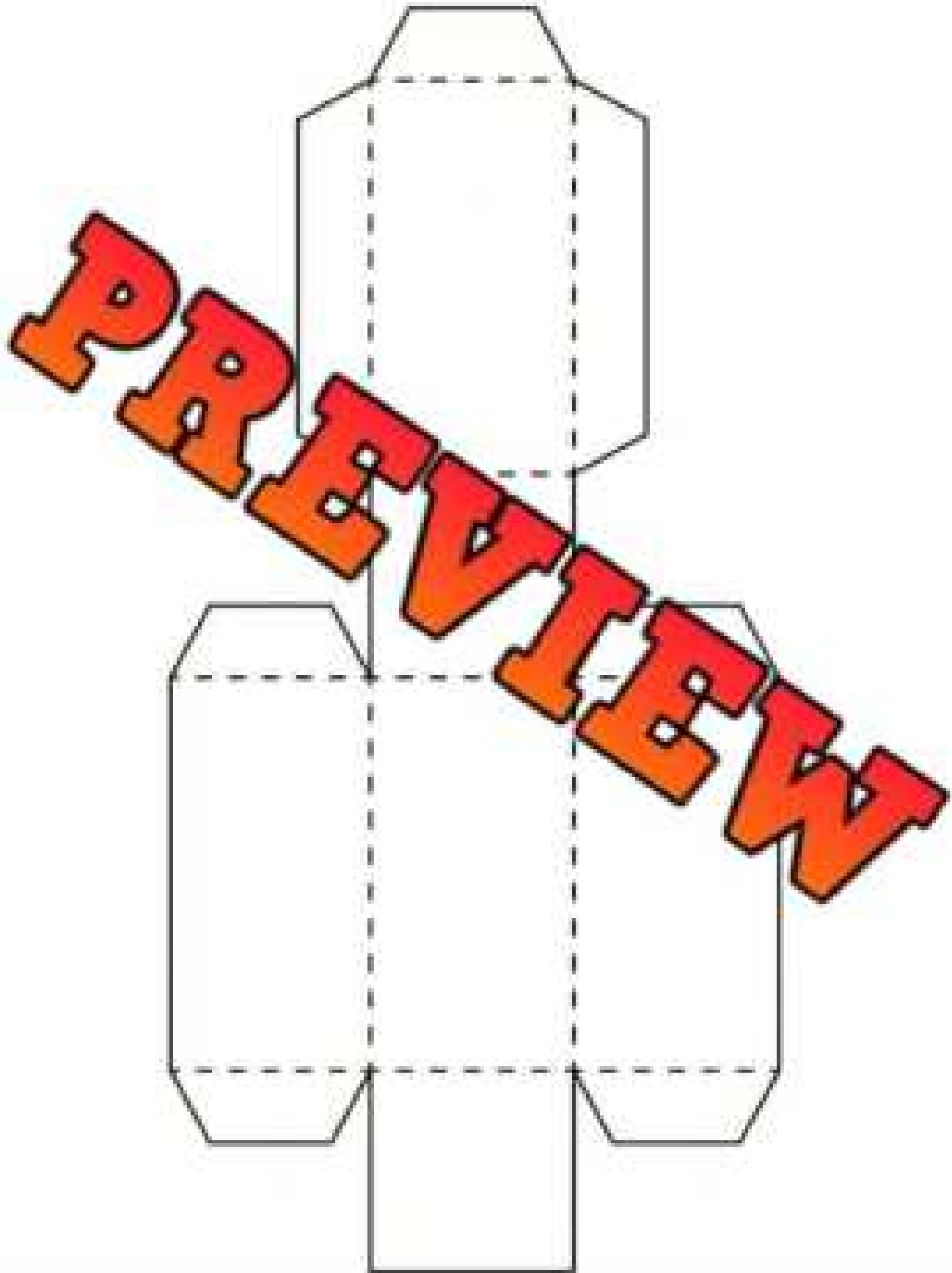
Are the lines parallel, intersecting, or perpendicular?



PREVIEW

Name: _____

Net – Rectangular Prism



Name: _____

60

Secondary Curriculum
G1

Net - Cube



Name: _____

61

Rectangular Prism
6.1

Net - Rectangular Prism



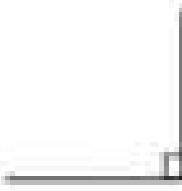
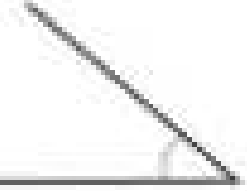

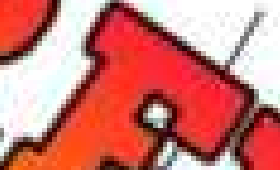




Name _____

Geometry Quiz



Part 1

Label the angles acute, right or obtuse

1) 	2) 	3) 	4) 
5) 	6) 	7) 	8) 




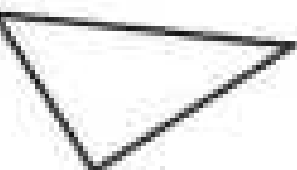
Part 2

Circle the angles below and write which they may be acute, right, or obtuse

Drawings		
Angles		

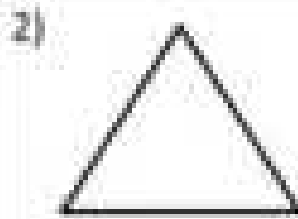
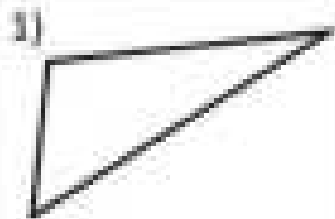
Part 3

Label the triangles acute, obtuse or right

1) 	2) 	3) 	4) 
--	--	---	--

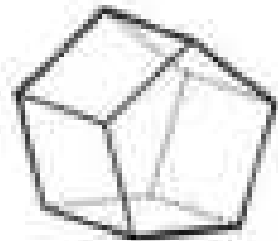
Part 4

Label the triangles equilateral, isosceles, or scalene



Part 5

Fill in the tables below based on the prisms



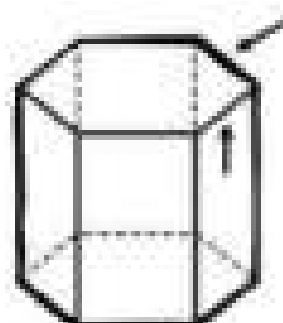
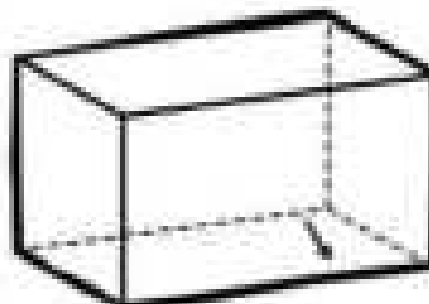
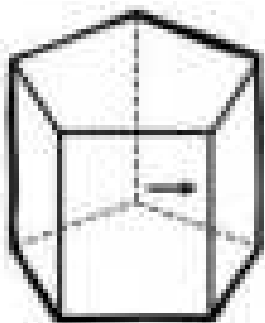
Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	



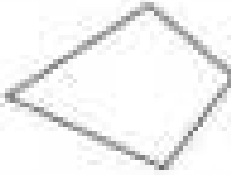
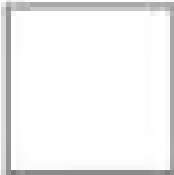
Faces	
Edges	
Vertices	
Name	

Part 6


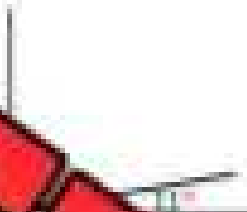

Are the lines parallel, intersecting, or perpendicular?




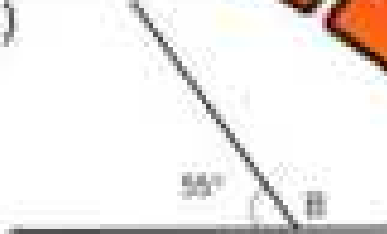

Part 7 Write the names of the quadrilaterals below

1) 	2) 	3) 	4) 

Part 8 Determine the complimentary angles

1) 	2) 	3) 
$\angle A = \underline{\hspace{2cm}}^\circ$	$\angle C = \underline{\hspace{2cm}}^\circ$	$\angle C = \underline{\hspace{2cm}}^\circ$

Part 9 Determine the supplementary angles

1) 	2) 	3) 
$\angle A = \underline{\hspace{2cm}}^\circ$	$\angle B = \underline{\hspace{2cm}}^\circ$	$\angle C = \underline{\hspace{2cm}}^\circ$

Part 10 Fill in the table by writing in the complementary and supplementary angles

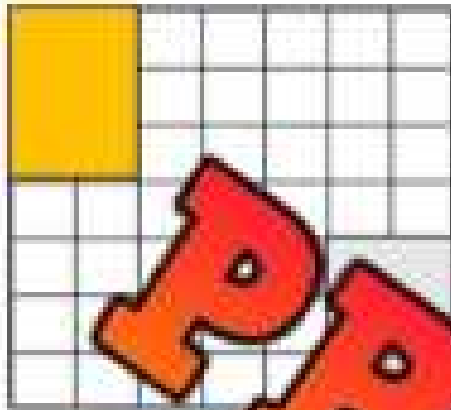
Angle	Supplementary	Complementary
14°		
64°		
82°		

Angle	Supplementary	Complementary
76°		
31°		
52°		

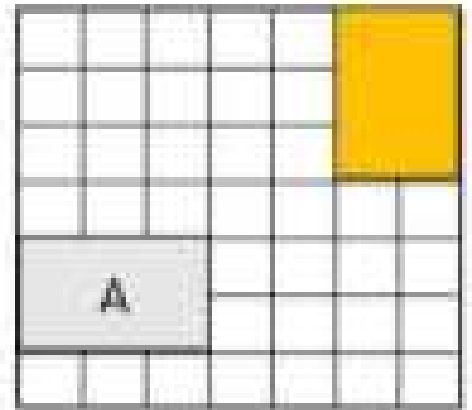
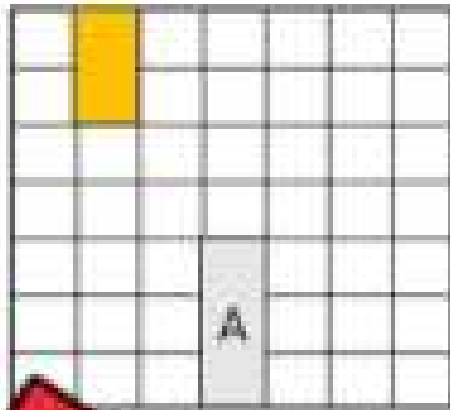
Translation or Not?

Instructions

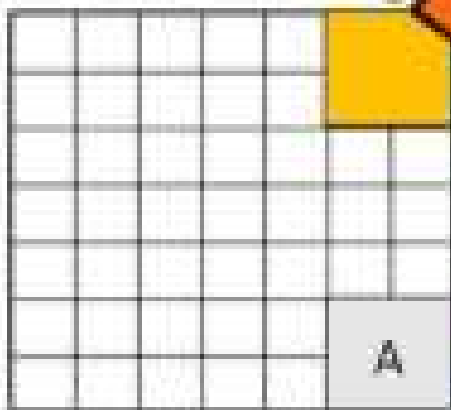
Is the transformation a translation or not? Write yes or no.



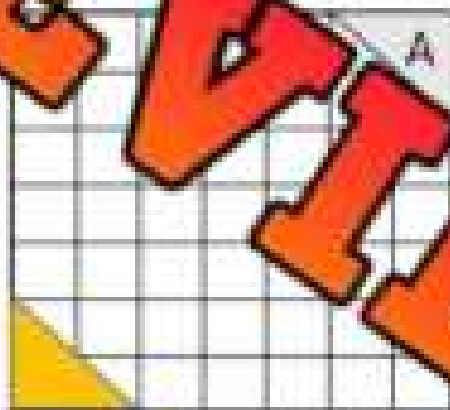
1) _____



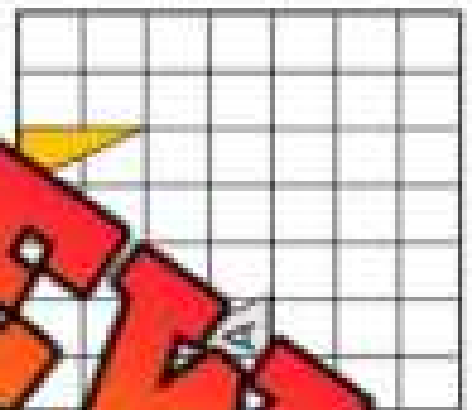
3) _____



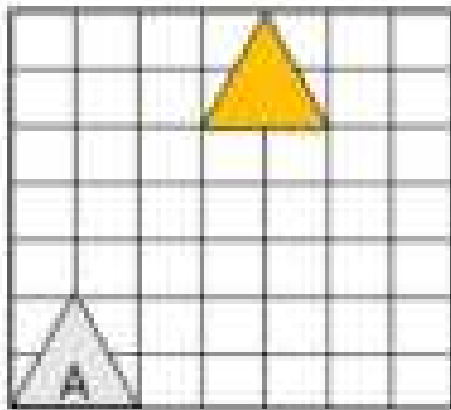
4) _____



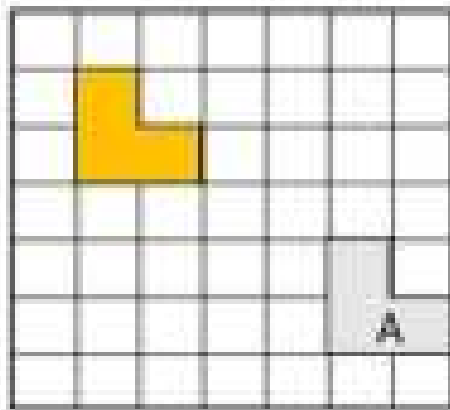
5) _____



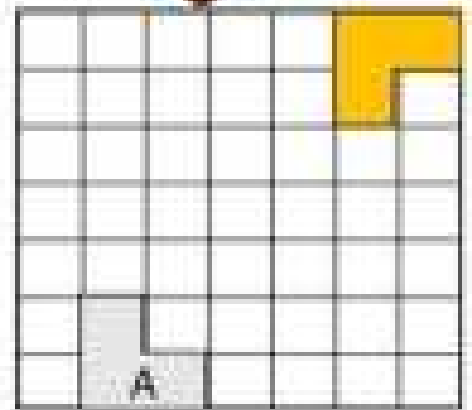
6) _____



7) _____



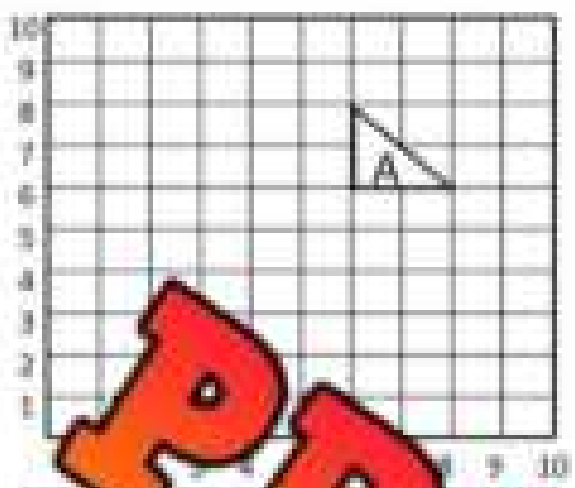
8) _____



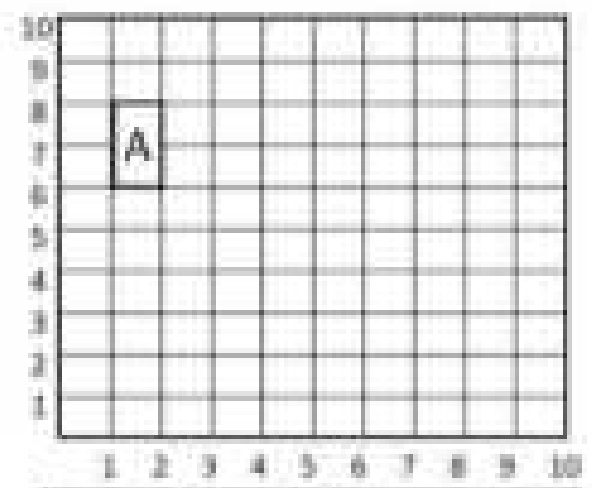
9) _____

PREVIEW

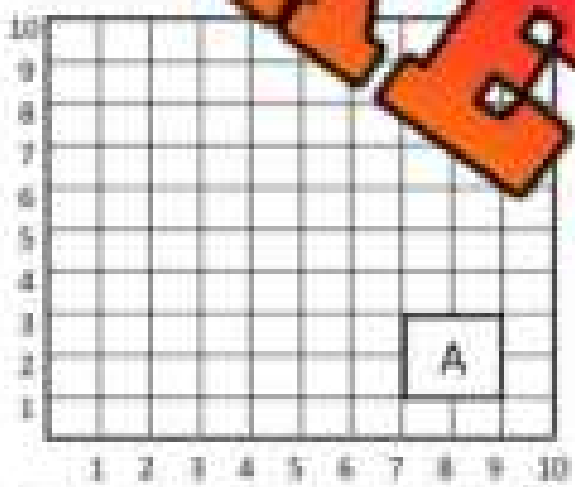
Translating Shapes – Cartesian Plane



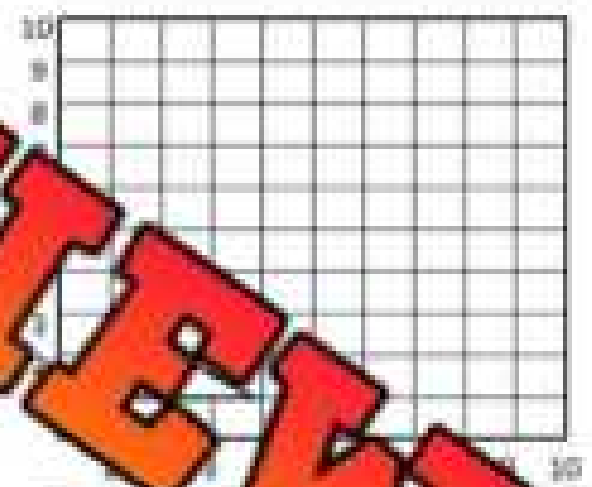
1) _____



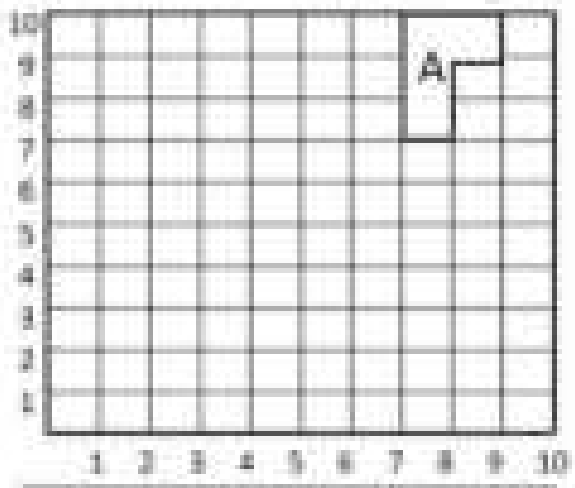
2) Right 5, down 4



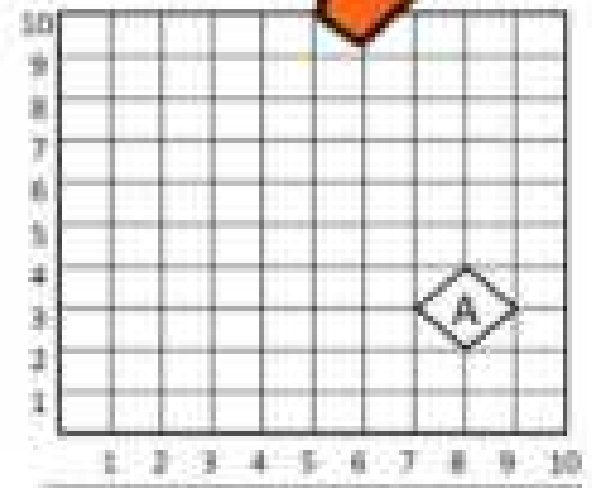
3) Left 6, up 2



4) _____



5) Left 3, down 6

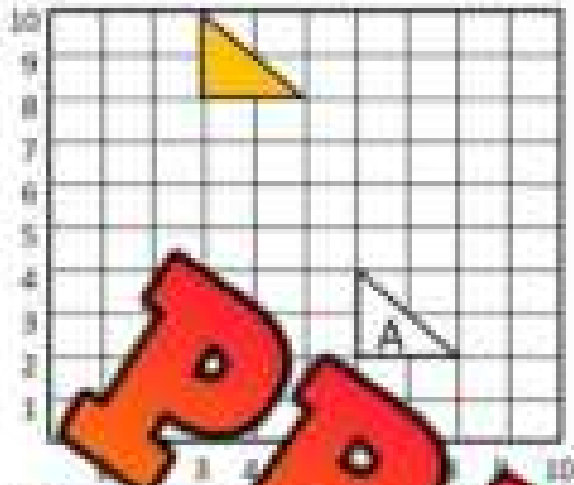


6) Left 2, up 4

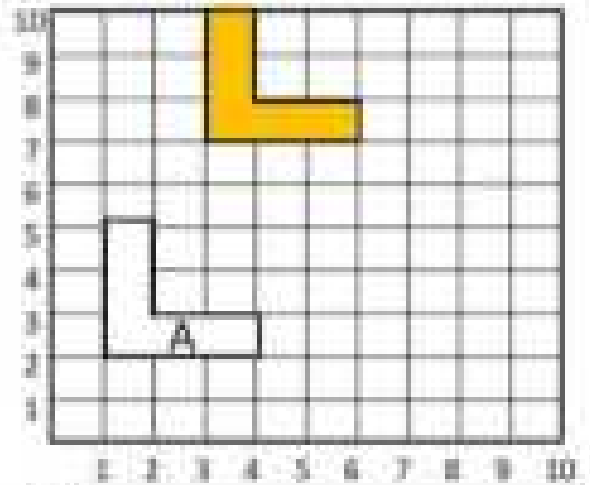
PREVIEW

Describing Translations – Cartesian Plane

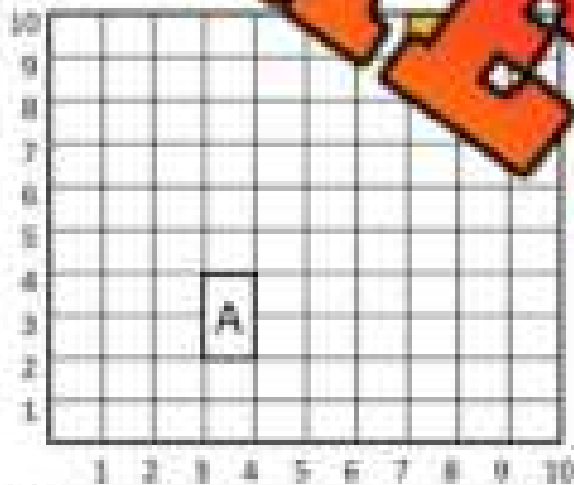
Instructions: Describe the translations below. Shape A is the original shape.



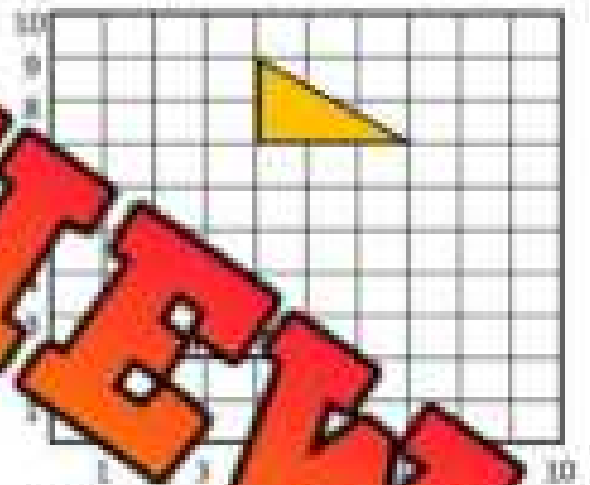
1)



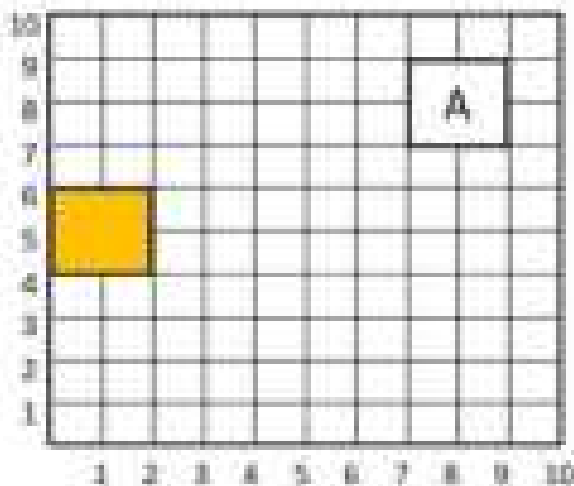
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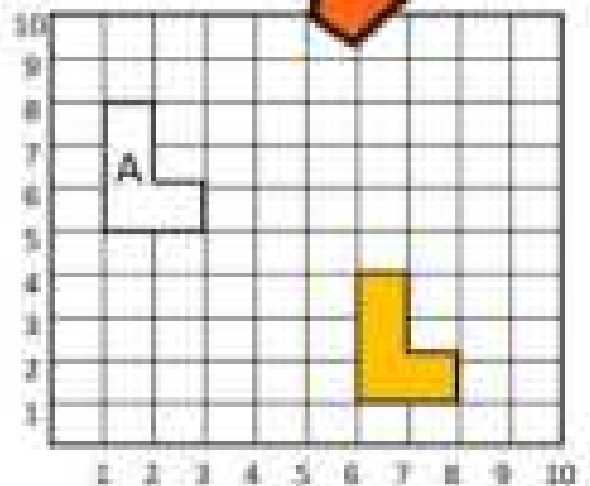
3)



4)



5)



6)

Math Activity: Translation Relay Race

Objective

What are we learning about?

To help students understand and describe translations on a Cartesian plane through a fun and engaging relay race activity.

Materials

What you will need for the activity.

- Graph paper
- Colored pencils
- Pencils and erasers
- Translation task cards



Instructions

How you will do the activity

1. **Explain Translations:** Start by explaining translations on the Cartesian plane involve moving shapes without rotating or resizing them.
2. **Distribute Materials:** Provide each team with a sheet of graph paper and a set of translation task cards.
3. **Form Teams:** Divide the class into small teams, ensuring each team has their graph paper and task cards.
4. **Translation Task:** The first student in each team picks a translation task card and strategically draws a shape on the grid, ensuring it can fit after the translation.
5. **Perform Translation:** The student then moves the shape according to the instructions on the task card and draws the new position on the grid.
6. **Pass to Next Student:** The student then goes to the end of the line, and the next student steps up.
7. **Repeat Process:** The next student repeats the process: drawing the shape at its new position, selecting a new translation task card, and performing the translation.
8. **Continue Relay:** Continue the relay until all team members have had a turn or all task cards are used.
9. **Verification and Discussion:** The teacher verifies the translations, and the class discusses the different translations and observations.

Task Cards

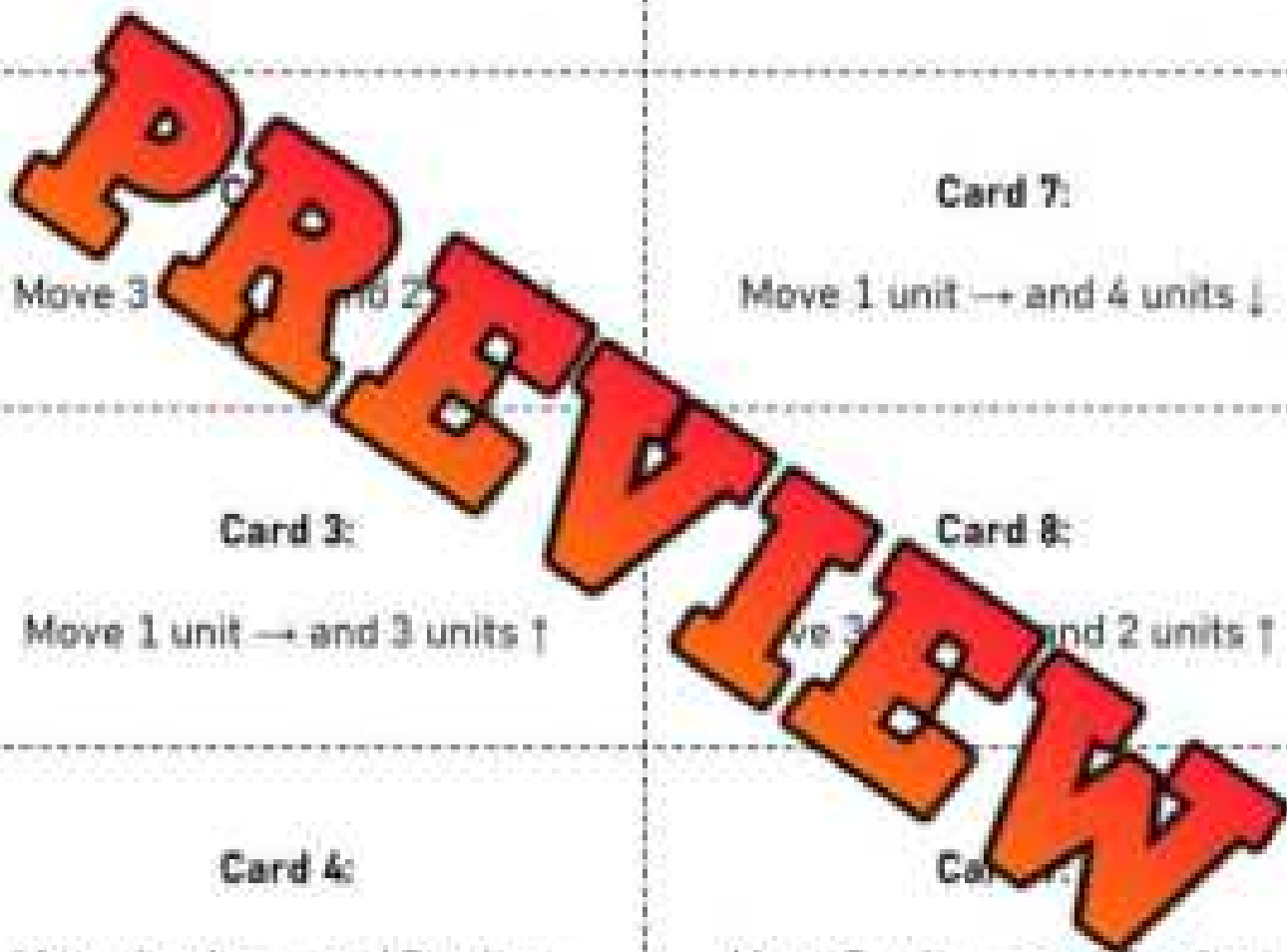
Cut out the cards below

Card 1:

Move 2 units \rightarrow and 1 unit \uparrow

Card 6:

Move 2 units \leftarrow and 3 units \uparrow



Card 7:

Move 1 unit \rightarrow and 4 units \downarrow

Card 3:

Move 1 unit \rightarrow and 3 units \uparrow

Card 8:

Move 3 units \rightarrow and 2 units \uparrow

Card 4:

Move 4 units \rightarrow and 2 units \uparrow

Card 9:

Move 2 units \rightarrow and 2 units \downarrow

Card 5:

Move 1 unit \leftarrow and 2 units \downarrow

Card 10:

Move 1 unit \leftarrow and 3 units \uparrow

Task Cards

Cut out the task cards below

Card 11:

Move 4 units \rightarrow and 1 unit \downarrow

Card 16:

Move 2 units \leftarrow and 2 units \uparrow

Move 3 units \leftarrow and 5 units \uparrow

Card 17:

Move 2 units \rightarrow and 3 units \downarrow

Card 13:

Move 3 units \rightarrow and 2 units \downarrow

Card 18:

Move 5 units \leftarrow and 2 units \downarrow

Card 14:

Move 3 units \leftarrow and 5 units \uparrow

Card 19:

Move 5 units \rightarrow and 4 units \downarrow

Card 15:

Move 4 units \rightarrow and 3 units \uparrow

Card 20:

Move 5 units \leftarrow and 1 unit \uparrow

PREVIEW

Name: _____

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Grid Paper

1 x 1 cm grid paper

PREVIEW

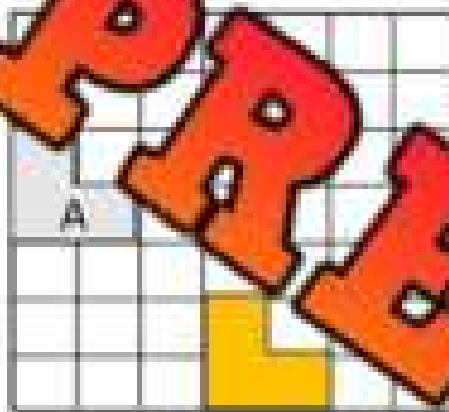
Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class.

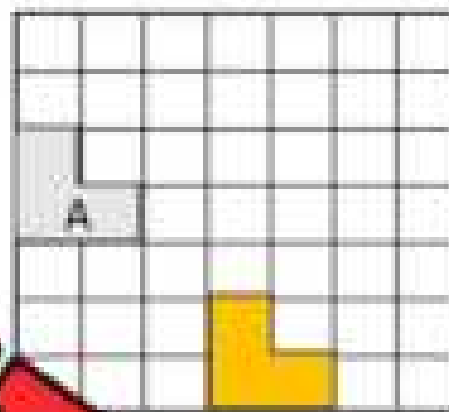
Name: _____

Describe the translation below. Shape A is the original object.



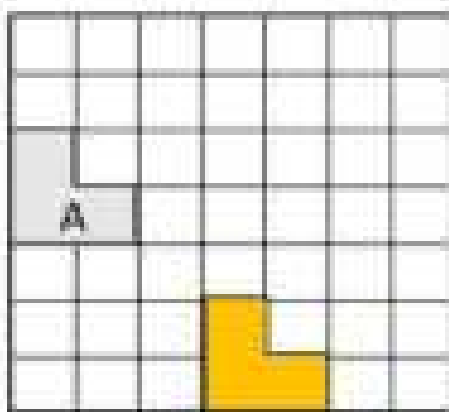
Name: _____

Describe the translation below. Shape A is the original object.



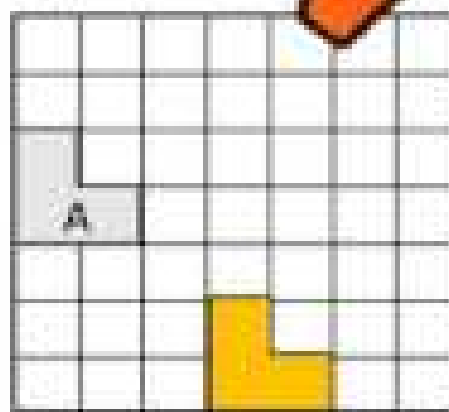
Name: _____

Describe the translation below. Shape A is the original object.



Name: _____

Describe the translation below. Shape A is the original object.

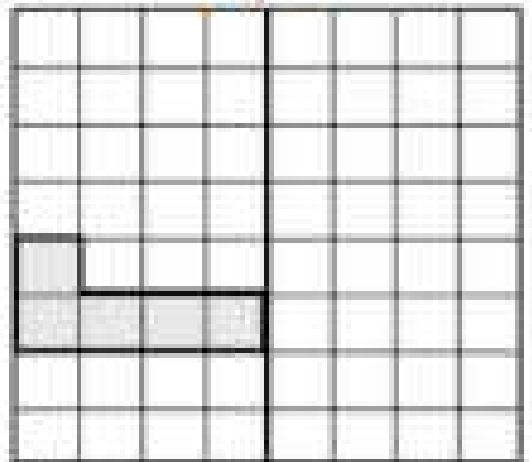
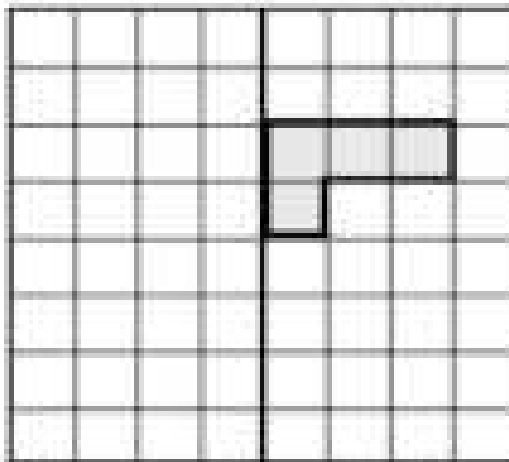
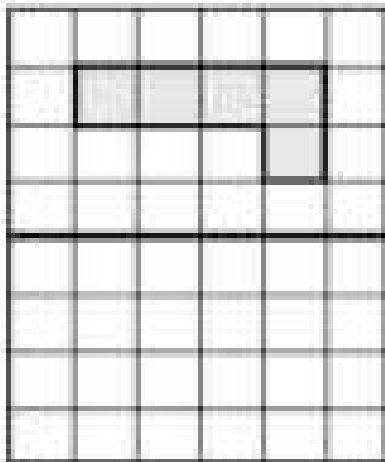
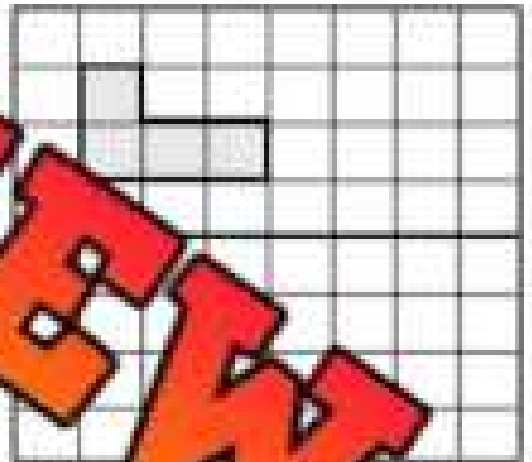
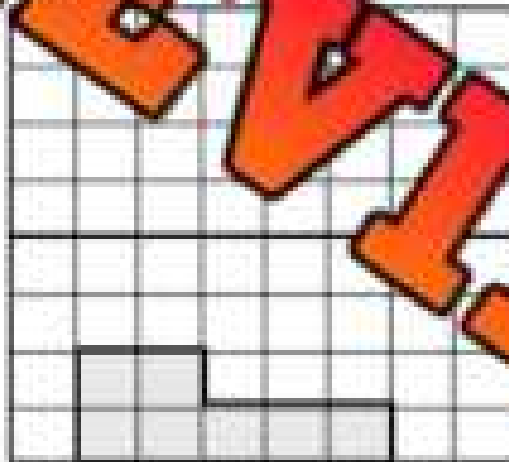
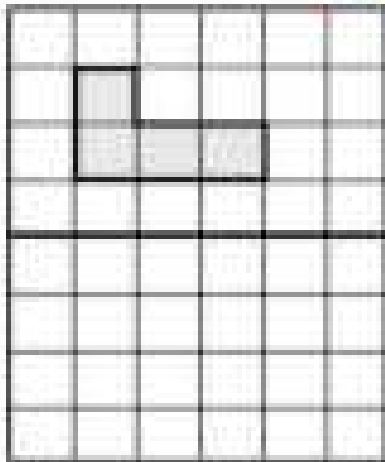
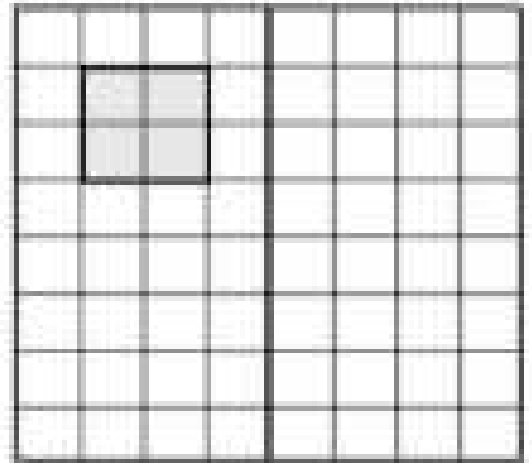
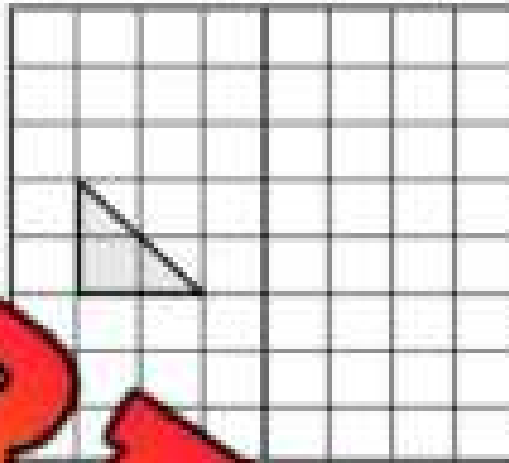
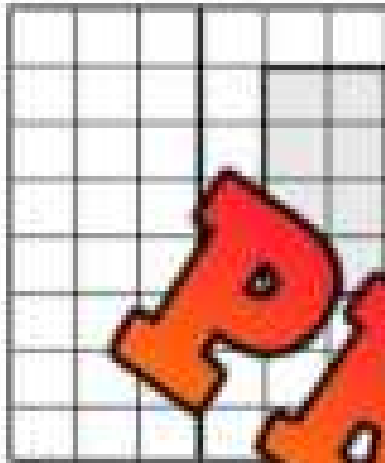


PREVIEW

Drawing Reflections

Instructions

Reflect the shapes across the mirror line

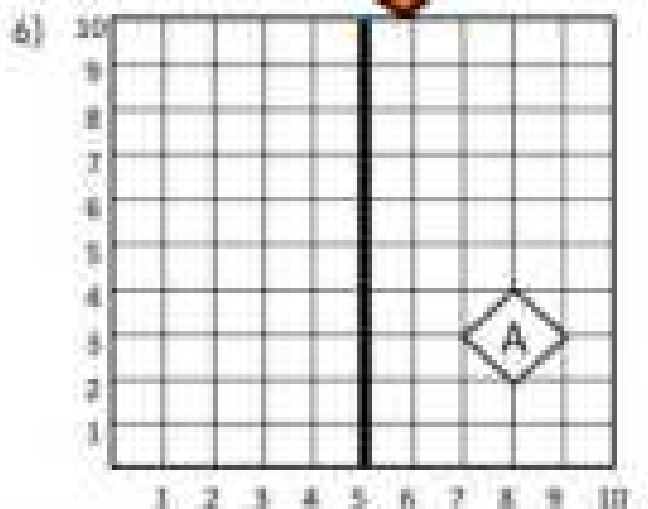
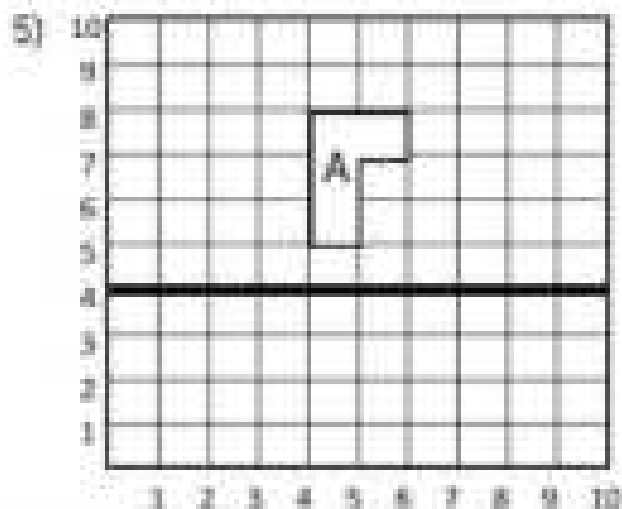
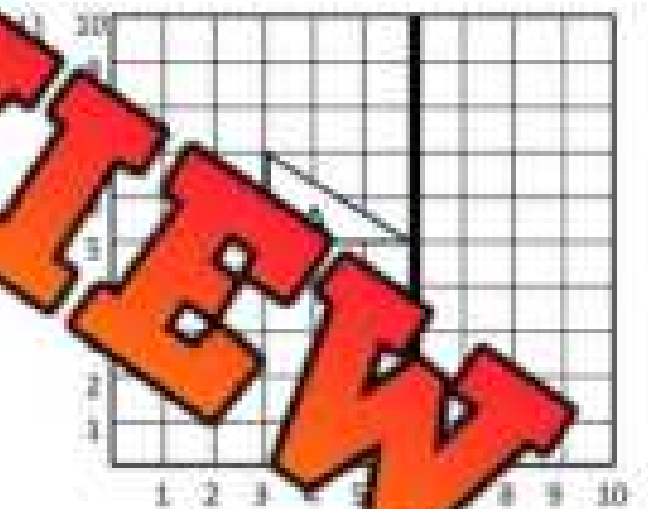
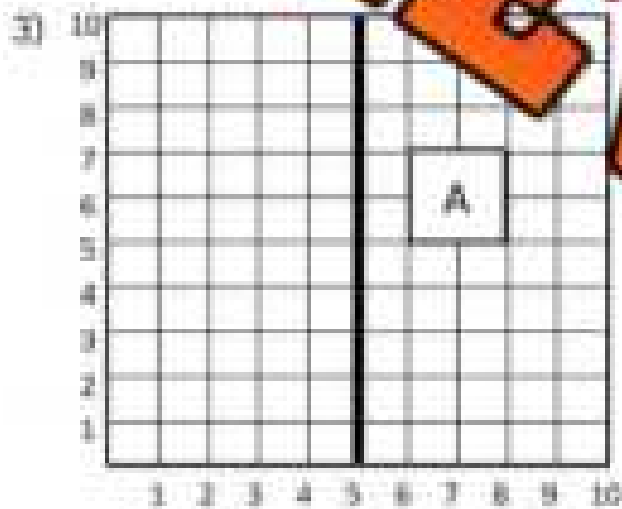
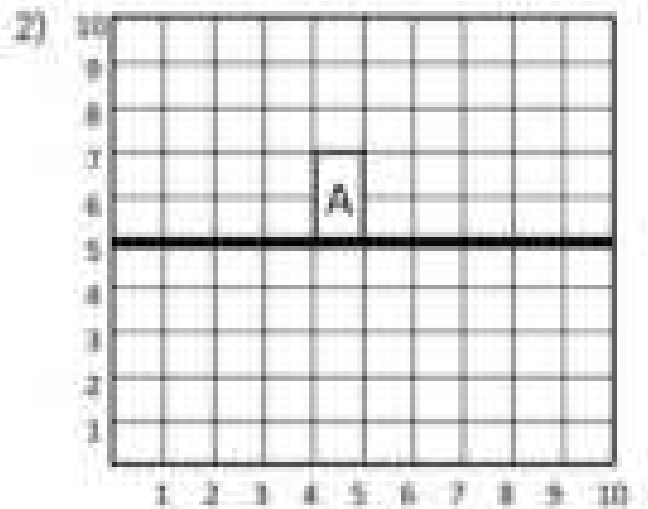
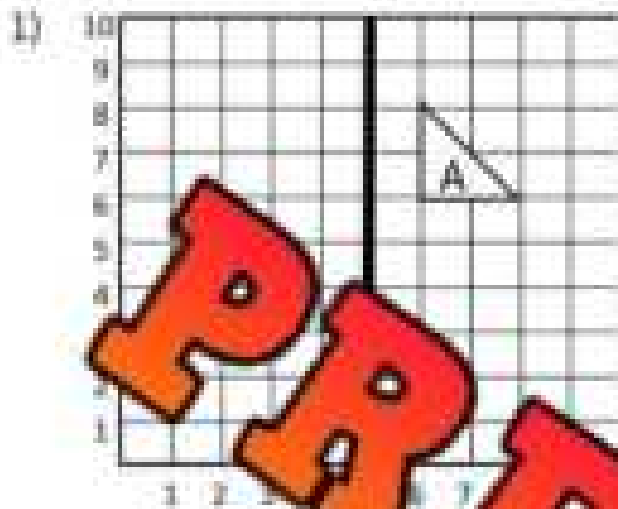


PREVIEW

Reflecting Shapes – Cartesian Plane

Instructions

Reflect the shapes across the mirror line



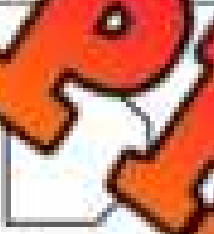
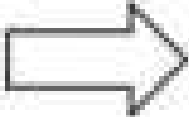
Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class.

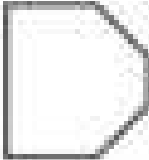

Name: _____

Draw the shape across the reflection line.

1)		
2)		

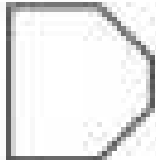
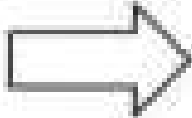
Name: _____

Draw the shape across the reflection line.

1)		
2)		

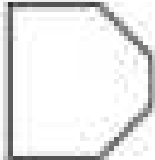
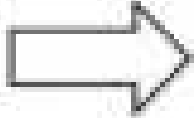
Name: _____

Draw the shape across the reflection line.

1)		
2)		

Name: _____

Draw the shape across the reflection line.

1)		
2)		

PREVIEW

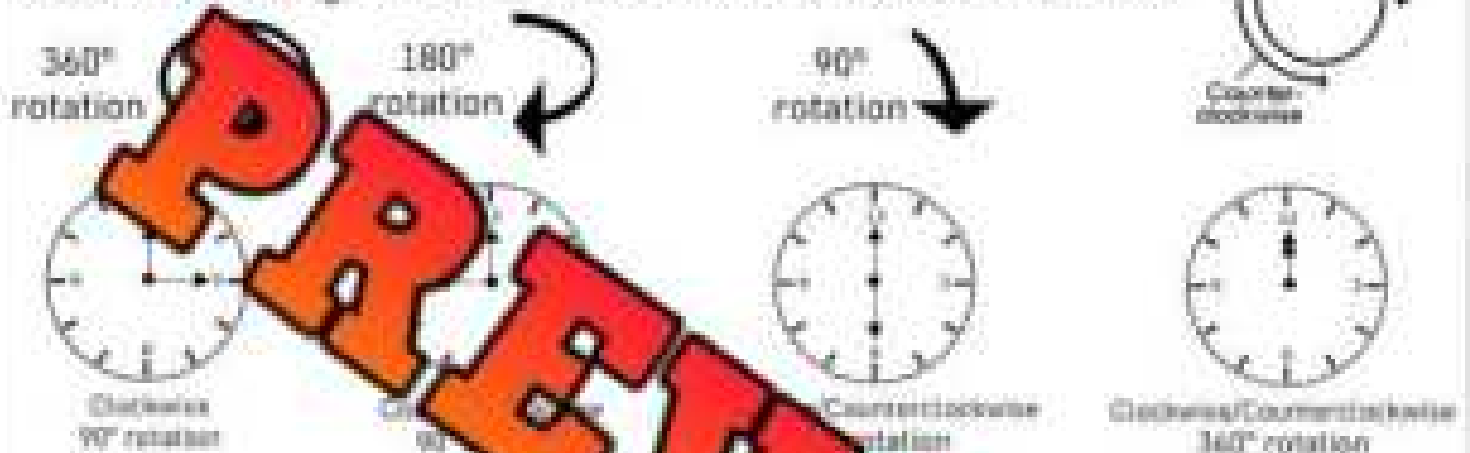
Clockwise and Counterclockwise Rotations

Rotations can either be clockwise or counterclockwise.

A **clockwise** rotation moves the same way the minute, second, and hour hands move on a clock.

A **counterclockwise** rotation moves the opposite way of a clockwise turn.

We can rotate things a lot or a little. Check out the three turns below.



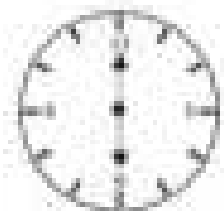
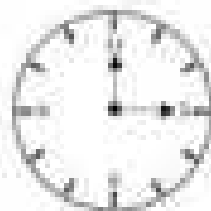
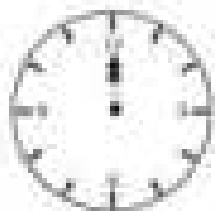
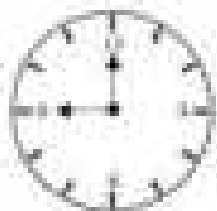
Part 1

Draw how the arrow turned on the clock.



Part 2

Describe how the arrow turned on the clock.



Clockwise and Counterclockwise Rotations

Rotations can either be clockwise or counterclockwise.

A clockwise rotation moves the same way the minute, second, and hour hands move on a clock.

A counterclockwise rotation moves the opposite way of a clockwise turn.

We can rotate things a lot or a little. Check out the three turns below.

360°
rotation



180°
rotation



90°
rotation



Instructions

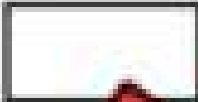

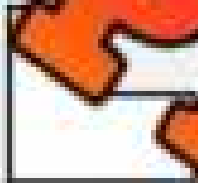


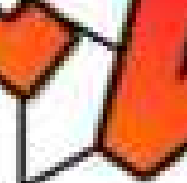

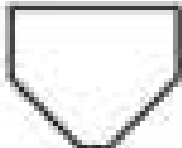
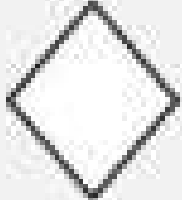
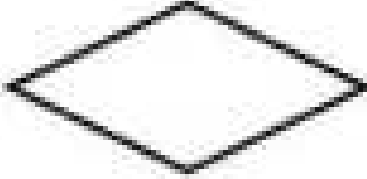
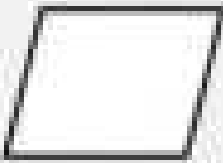
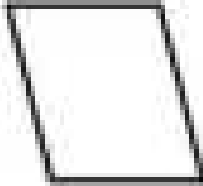
What object move? Circle the correct answer

1)			<input type="radio"/> Clockwise 90° rotation <input type="radio"/> Clockwise 180° rotation <input type="radio"/> Counterclockwise 90° rotation
2)			<input type="radio"/> Clockwise 90° rotation <input type="radio"/> Clockwise 180° rotation <input type="radio"/> Counterclockwise 90° rotation
3)			<input type="radio"/> Clockwise 90° rotation <input type="radio"/> Clockwise 180° rotation <input type="radio"/> Counterclockwise 360° rotation
4)			<input type="radio"/> Clockwise 90° rotation <input type="radio"/> Clockwise 180° rotation <input type="radio"/> Counterclockwise 90° rotation
5)			<input type="radio"/> Clockwise 90° rotation <input type="radio"/> Counterclockwise 90° rotation <input type="radio"/> Counterclockwise 180° rotation

Rotations

Instructions


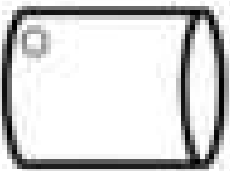
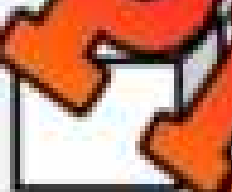
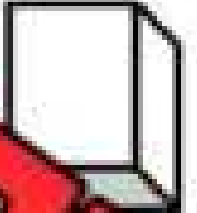

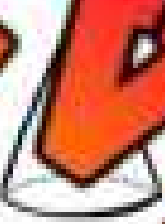
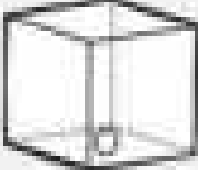
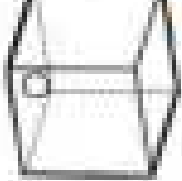

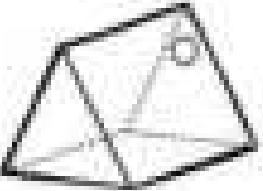
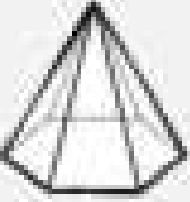
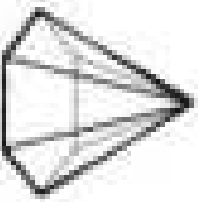
Has the shape been rotated? Yes or No?

1)			Yes	No
2)			Yes	No
3)			Yes	No
4)			Yes	No
5)			Yes	No
6)			Yes	No

PREVIEW

Rotations – 3D Objects**Instructions:**

Has the shape been rotated? Yes or No?

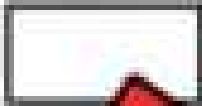

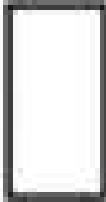


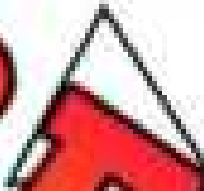
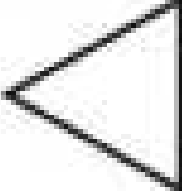

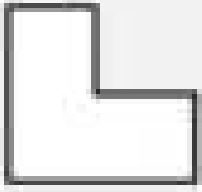
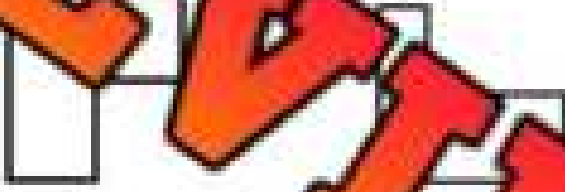
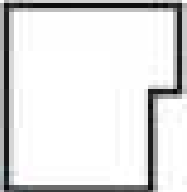



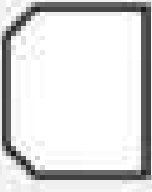
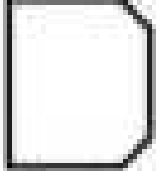
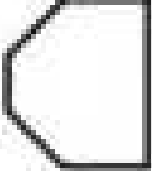
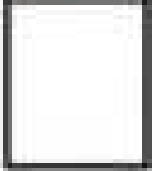
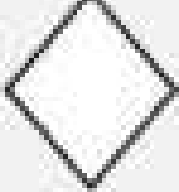
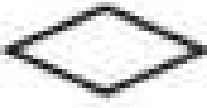
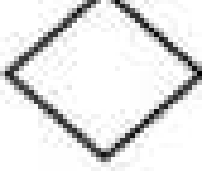
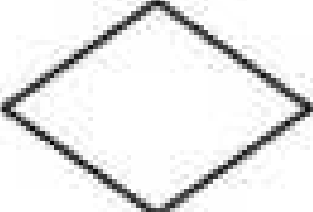
1)			Yes	No
2)			Yes	No
3)			Yes	No
4)			Yes	No
5)			Yes	No
6)			Yes	No

PREVIEW

Rotations

Instructions

Colour the objects that are rotations of the first object

1) 			
2) 			
3) 			
4) 			
5) 			
6) 			

PREVIEW

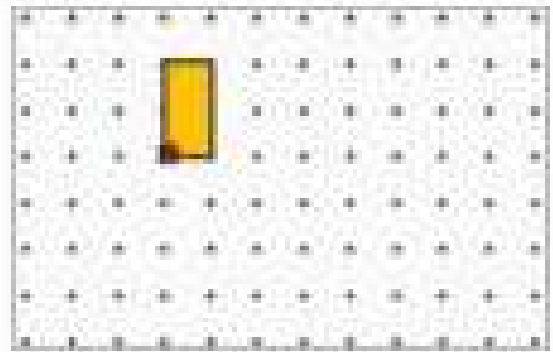
Drawing Rotations

Instructions

Rotate the shapes around the point marked ■



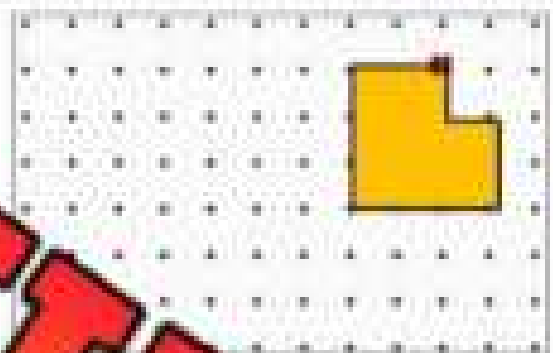
1) 90° clockwise rotation



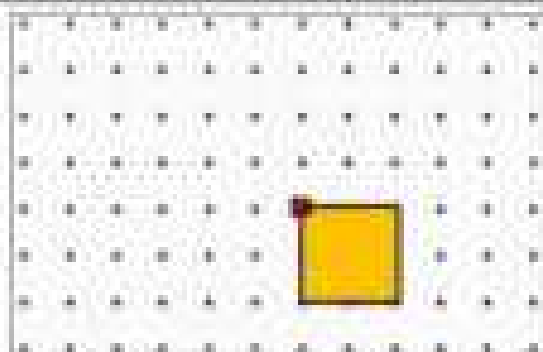
2) 180° counter-clockwise rotation



3) 180° clockwise rotation



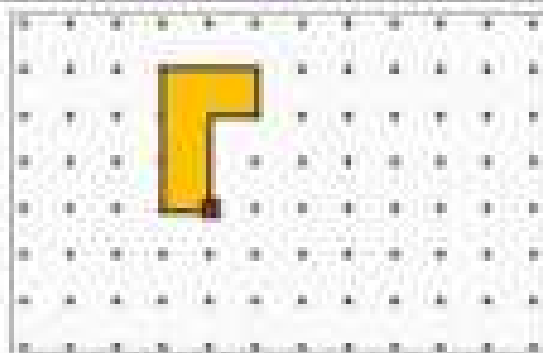
4) 360° clockwise rotation



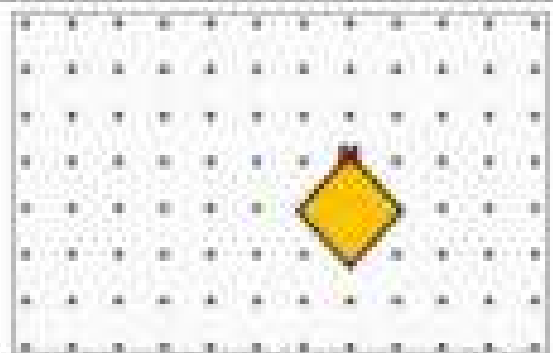
5) 90° counter-clockwise rotation



6) 180° counter-clockwise rotation



7) 90° clockwise rotation



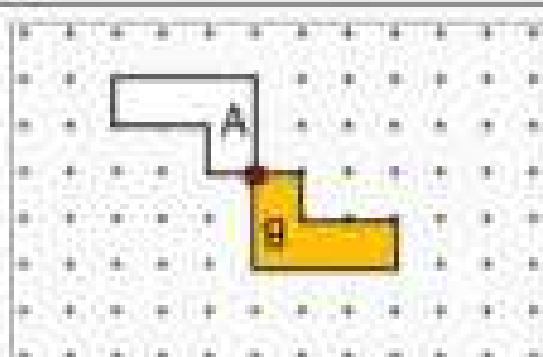
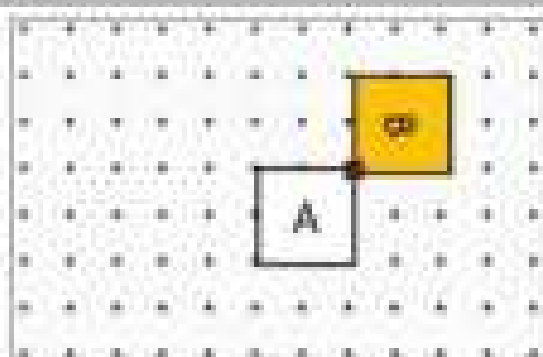
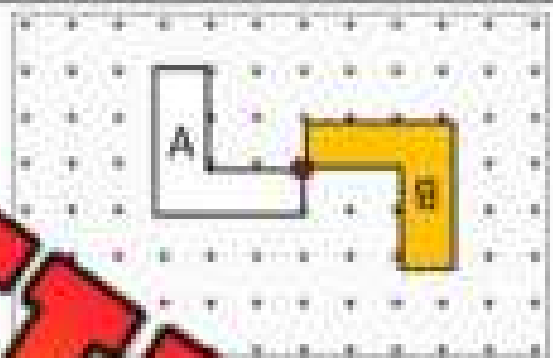
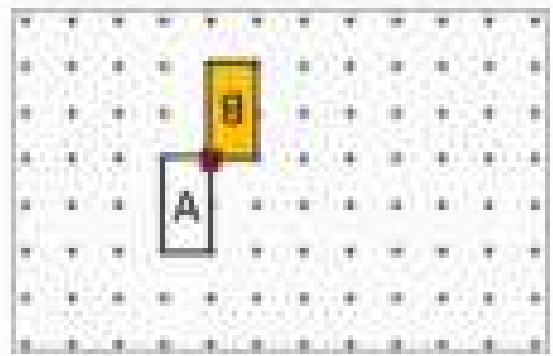
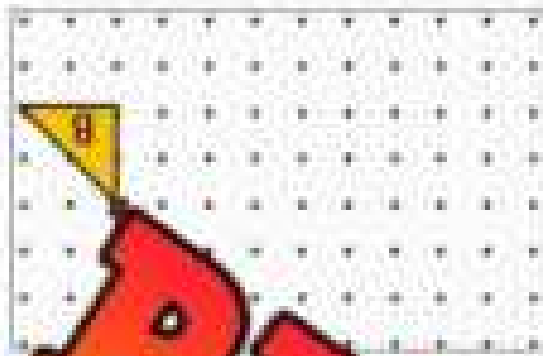
8) 180° counter-clockwise rotation

PREVIEW

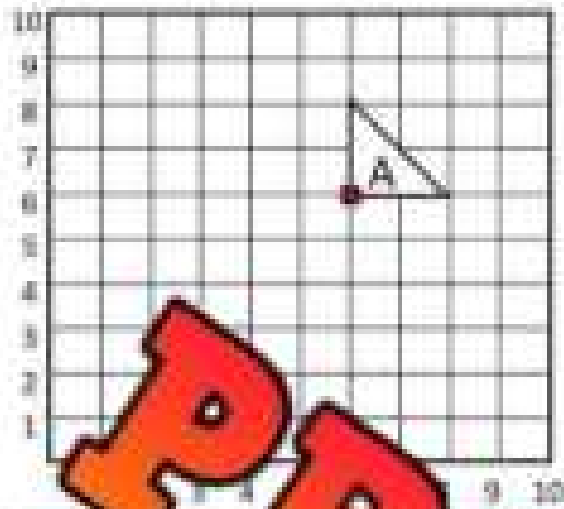
Describing Rotations

Instructions

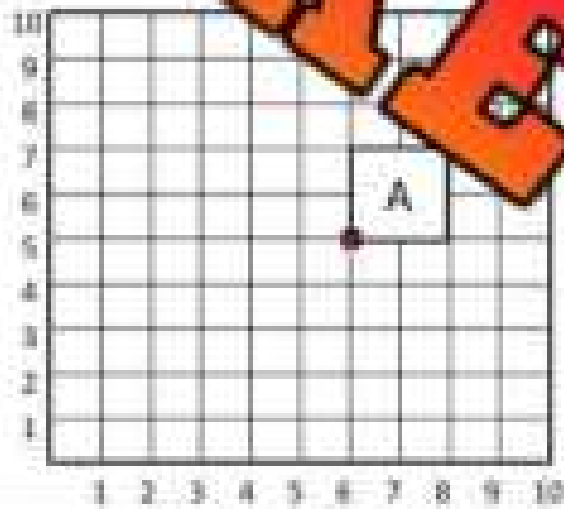
Describe the rotations. Shape A is the original shape.



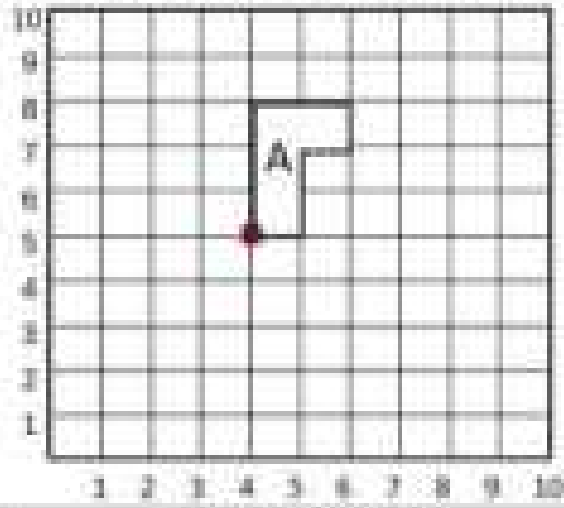
Rotating Shapes - Cartesian Plane



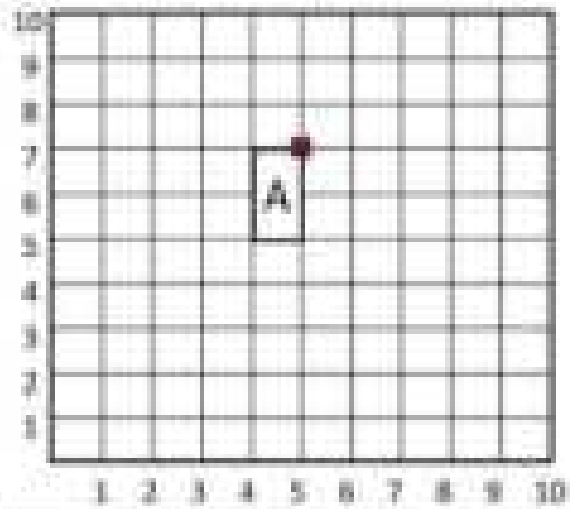
1) 90° counter-clockwise rotation



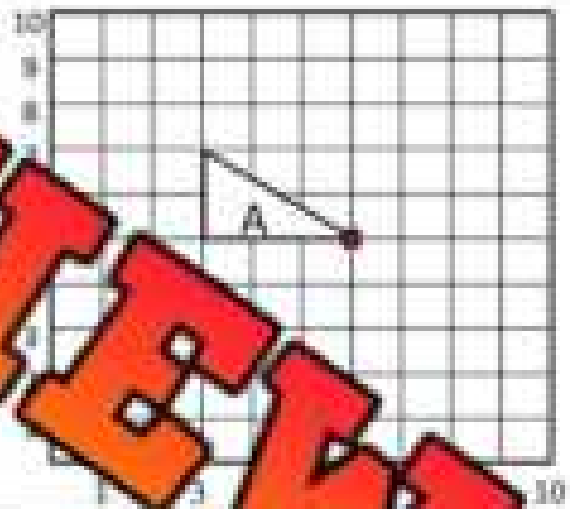
3) 90° clock-wise rotation



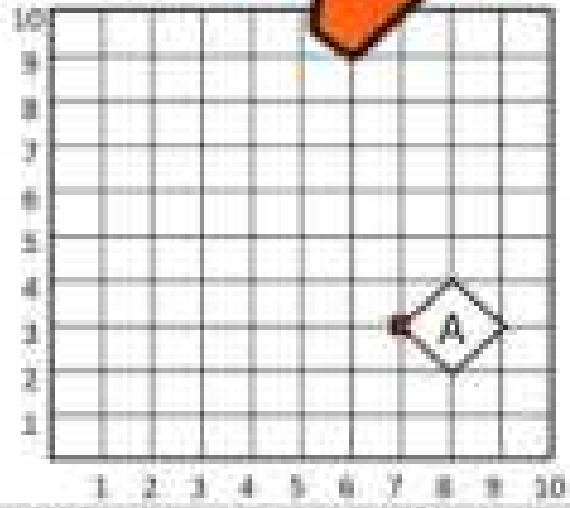
5) 180° rotation



2) 90° counter-clockwise rotation



4) 90° clock-wise rotation



6) 90° counter-clockwise rotation

PREVIEW

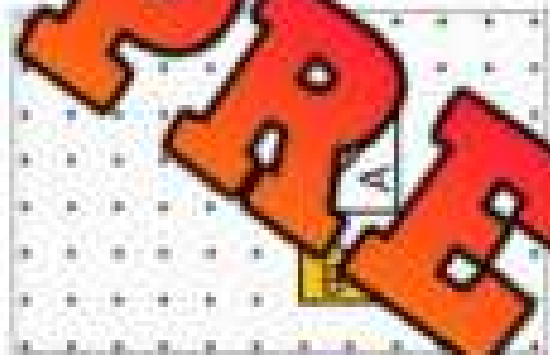
Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class.

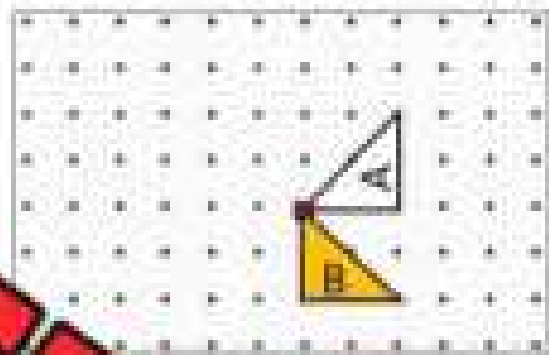
Name: _____

Describe the rotations. Shape A is the original.



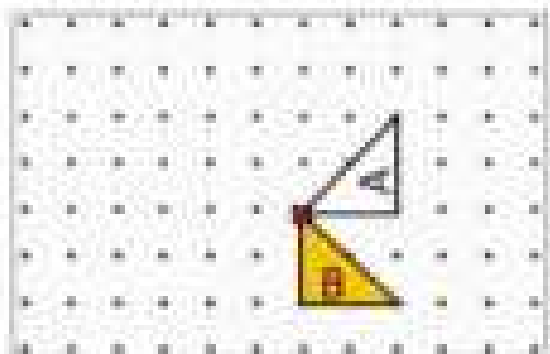
Name: _____

Describe the rotations. Shape A is the original shape.



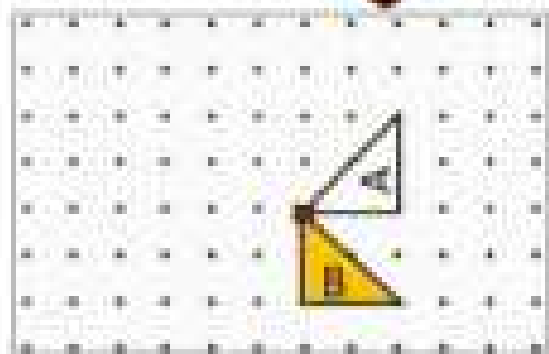
Name: _____

Describe the rotations. Shape A is the original shape.



Name: _____

Describe the rotations. Shape A is the original shape.



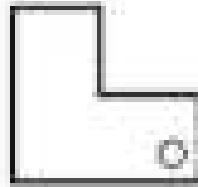
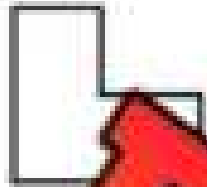
PREVIEW

Transformation

Instructions

Is the transformation a translation, reflection or rotation?

1)

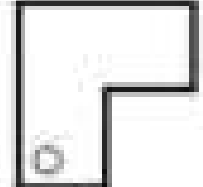
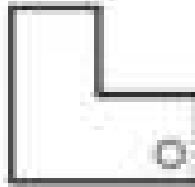


Translation

Reflection

Rotation

2)

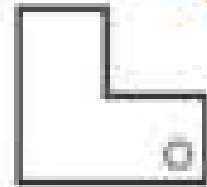


Translation

Reflection

Rotation

3)

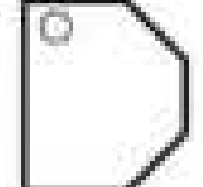


Translation

Reflection

Rotation

4)

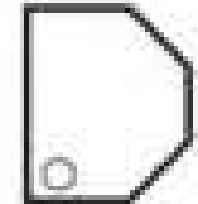
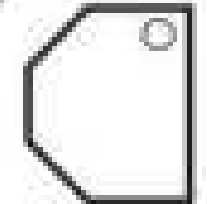


Translation

Reflection

Rotation

5)



Translation

Reflection

Rotation

6)

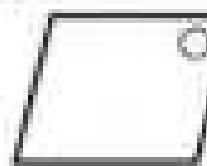


Translation

Reflection

Rotation

7)



Translation

Reflection

Rotation

8)



Translation

Reflection

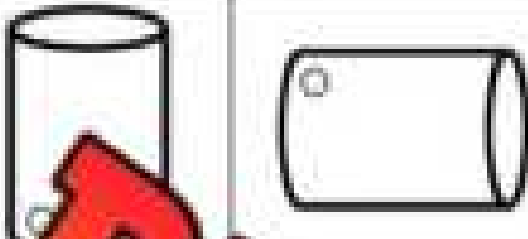
Rotation

Transformations of 3D Objects

Instructions

Is the transformation a translation, reflection or rotation?

1)

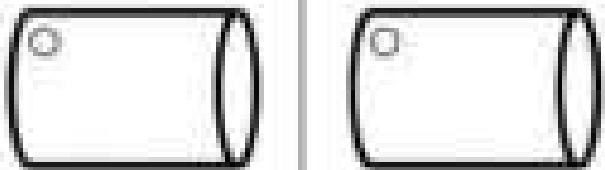


Translation

Reflection

Rotation

2)

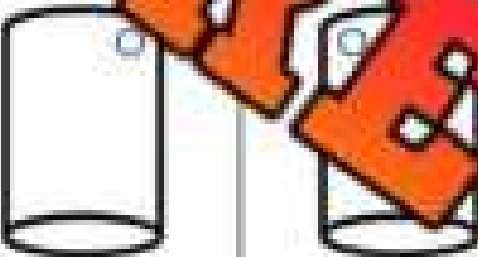


Translation

Reflection

Rotation

3)

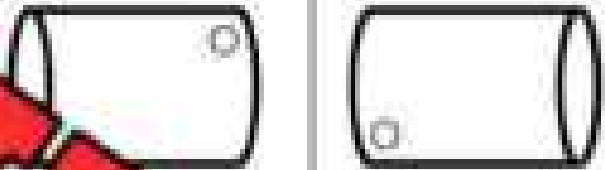


Translation

Reflection

Rotation

4)

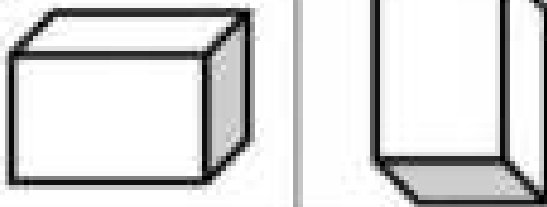


Translation

Reflection

Rotation

5)



Translation

Reflection

Rotation

6)

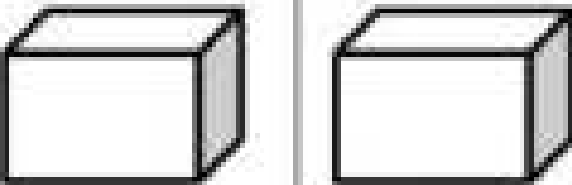


Translation

Reflection

Rotation

7)

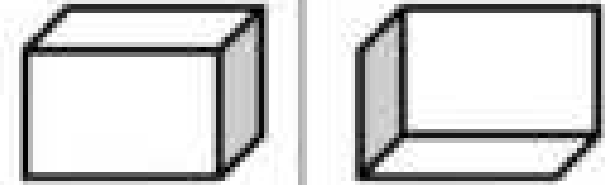


Translation

Reflection

Rotation

8)



Translation

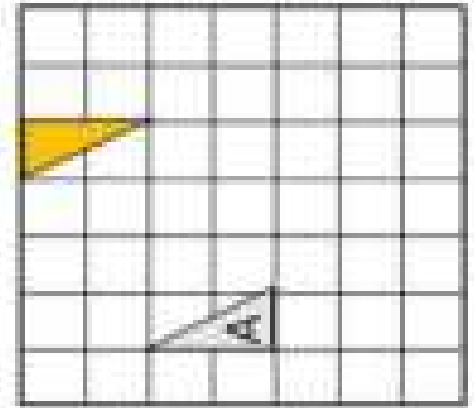
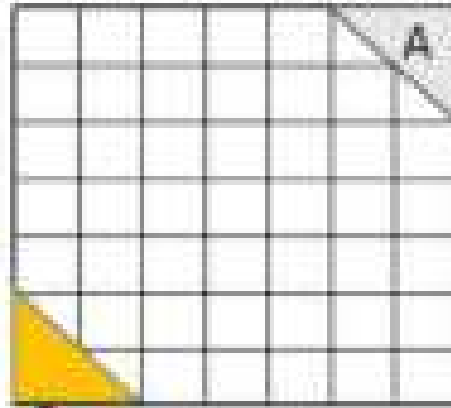
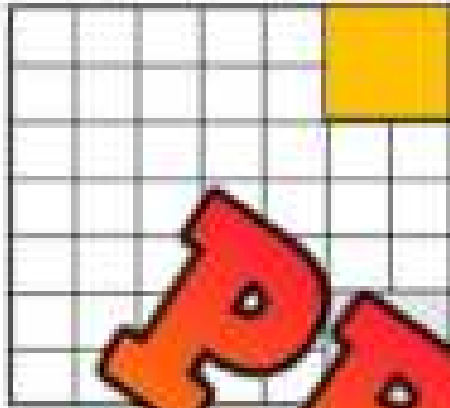
Reflection

Rotation

Unit Quiz - Transformations

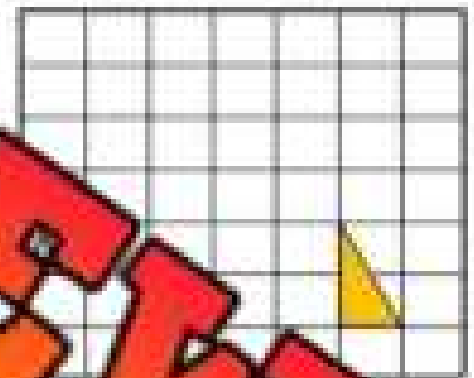
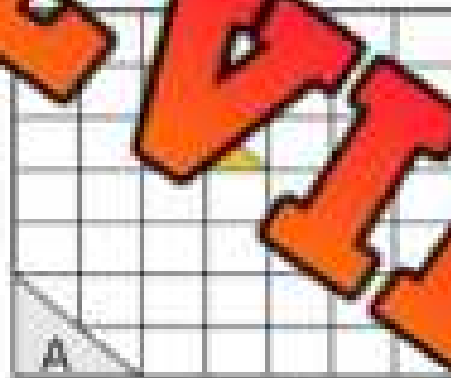
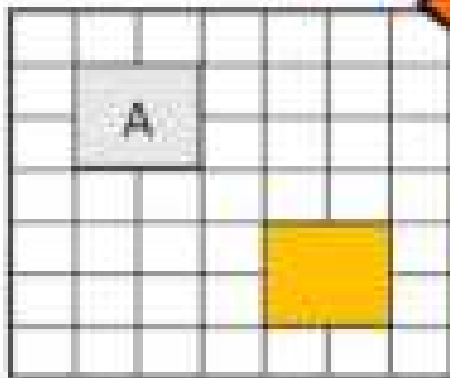
Part 1

Is the transformation a translation or not? Write yes or no.



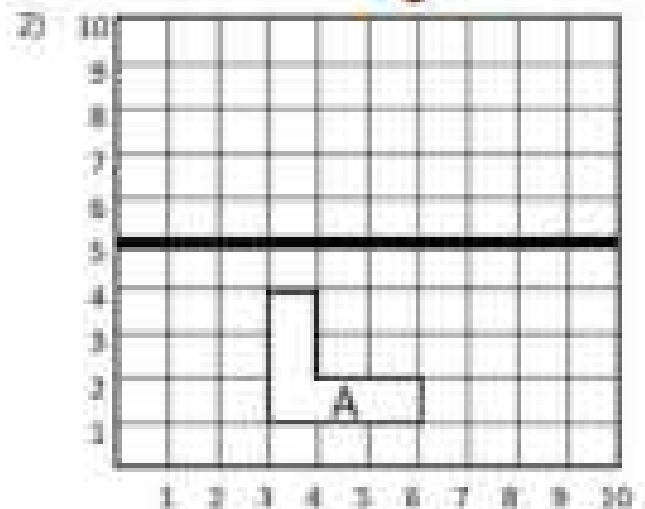
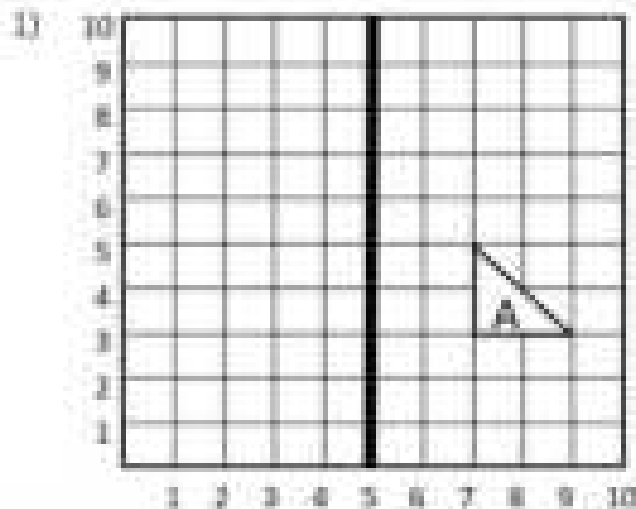
Part 2

Describe the translation using arrows. Shape A is the original object.

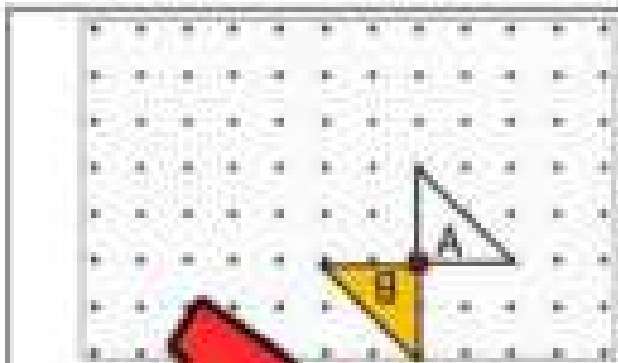


Part 3

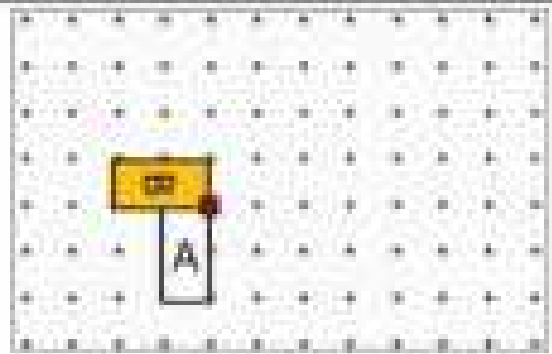
Reflect the shapes across the mirror line.



Part 4 Describe the rotations. Shape A is the original shape.

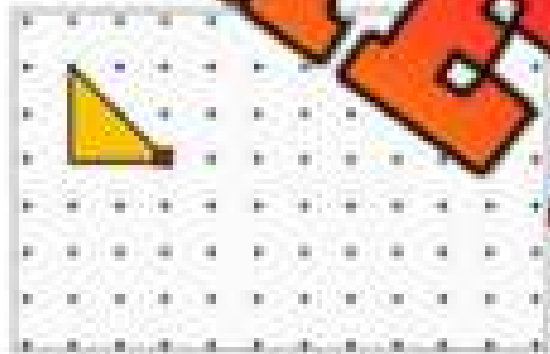


1)

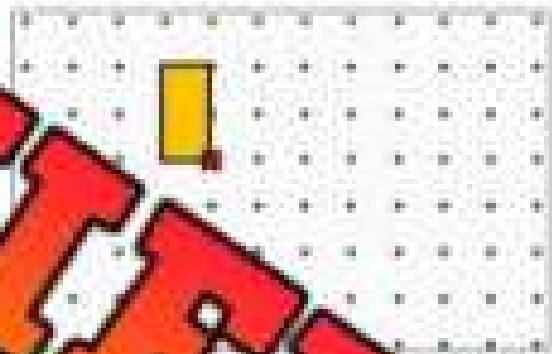


2)

Part 5 Rotate the point marked \times

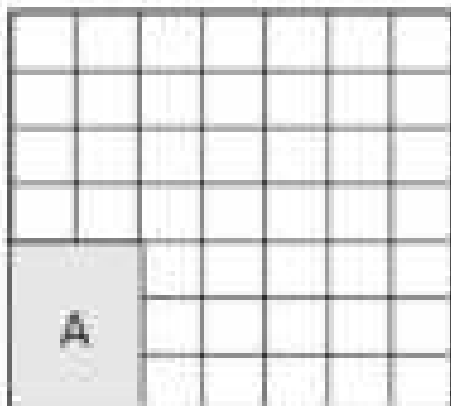


1) 90° counter-clockwise rotation

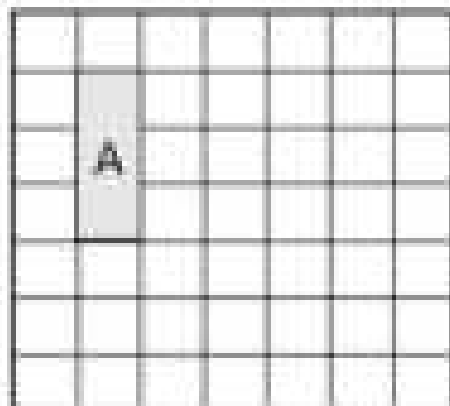


2) 180 degree rotation

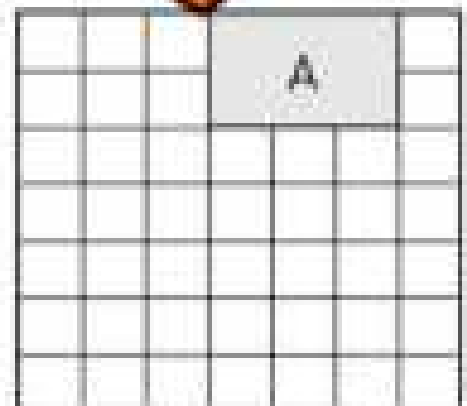
Part 6 Draw the new shape after reading the 3 steps



3 \uparrow , 4 \rightarrow 1 \downarrow



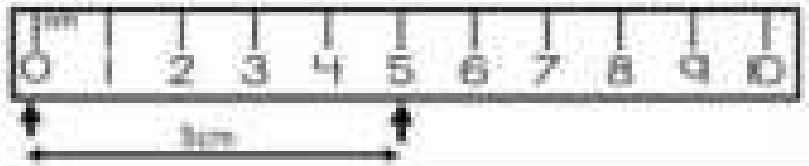
2 \downarrow , 4 \rightarrow 1 \downarrow



3 \downarrow , 2 \leftarrow , 2 \downarrow

Measuring in Centimetres

We can accurately measure the length of something by using a ruler.



Instructions

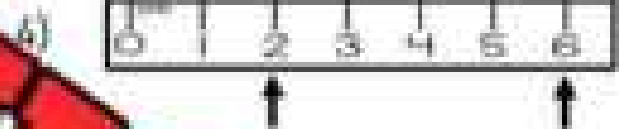
Read the rulers below to find the distance between the arrows.



_____ cm



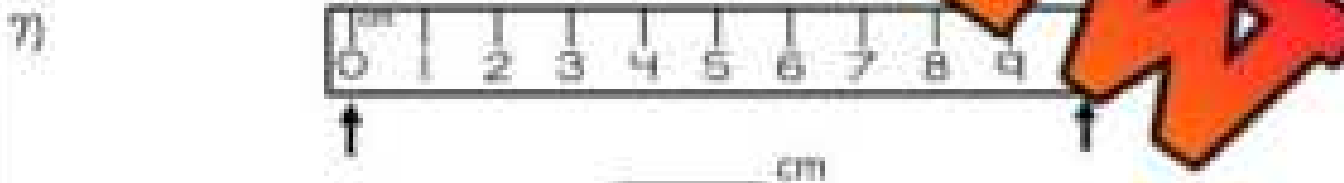
_____ cm



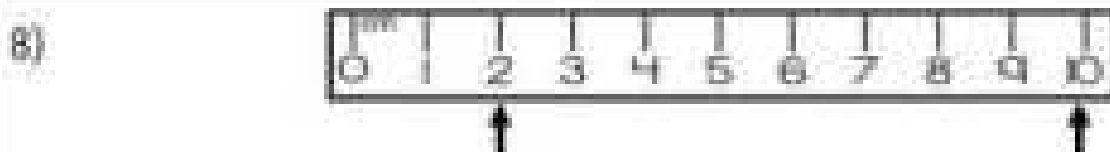
_____ cm



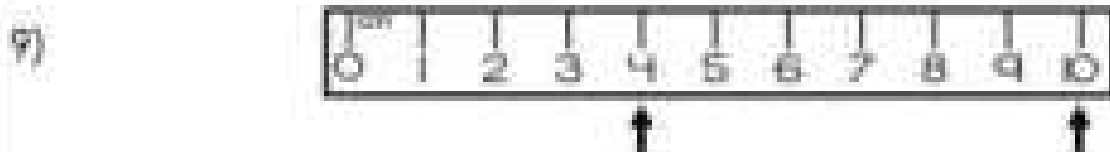
_____ cm



_____ cm



_____ cm



_____ cm

Measuring in Centimetres and Millimetres**Part 1**

Use a ruler to measure the lines below

1)



_____ cm

_____ mm

2)



_____ cm

_____ mm

3)



_____ cm

_____ mm

4)



_____ cm

_____ mm

5)



_____ cm

_____ mm

6)



_____ cm

_____ mm

7)



_____ cm

_____ mm

_____ mm

Part 2

Draw a line that is the correct length

1)

70 mm

2)

4 cm

3)

60 mm

4)

2 cm

5)

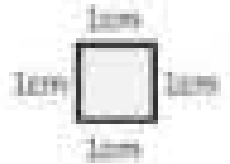
3 cm

6)

50 mm

Measuring Square Side Lengths

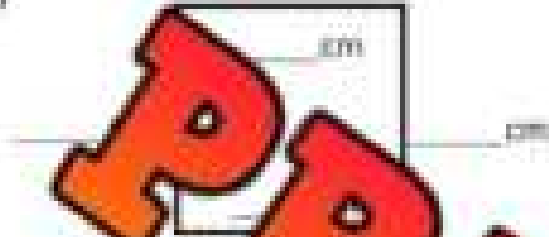
A square has 4 sides that are all the same length. We can find out if a shape is a square by measuring the side lengths.



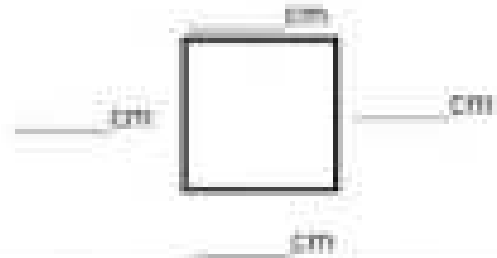
Part 1

Use a ruler to measure the squares below.

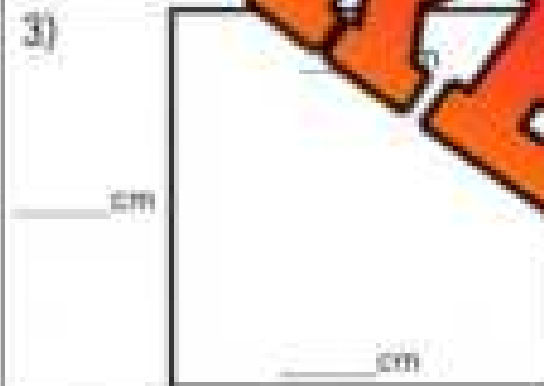
1)



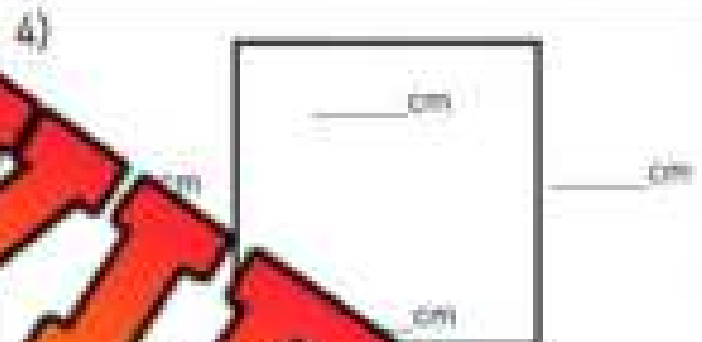
2)



3)



4)



Part 2

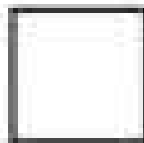
Are the shapes squares or rectangles?

1)



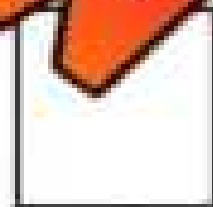
Square Rectangle

2)



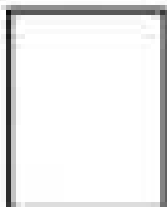
Square Rectangle

3)



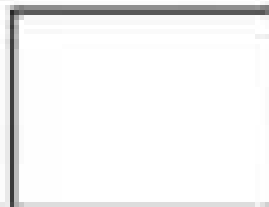
Square Rectangle

4)



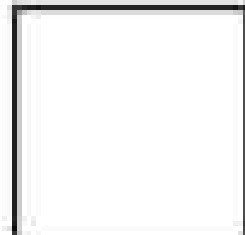
Square Rectangle

5)



Square Rectangle

6)



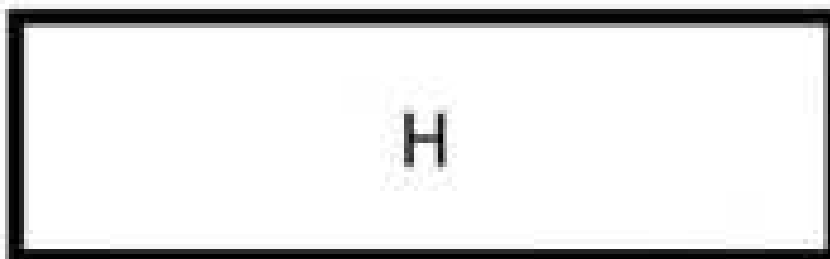
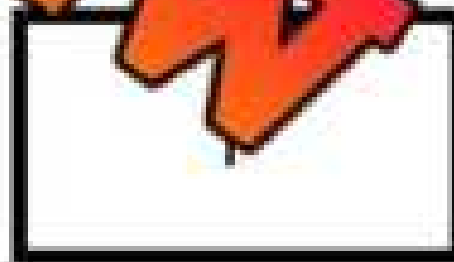
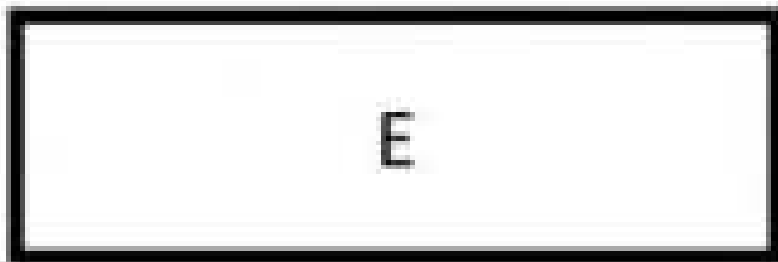
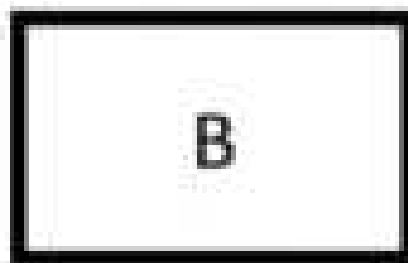
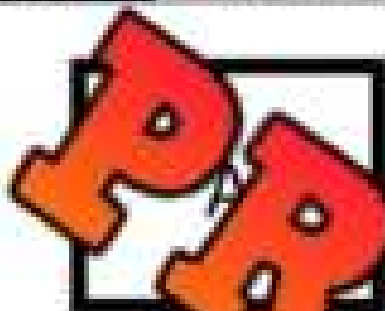
Square Rectangle

Area

We can compare the area of two shapes by covering one object with the other. If one object can't cover the other, it has less area.

Instructions

Cut the shapes out and cover other shapes to see which are larger



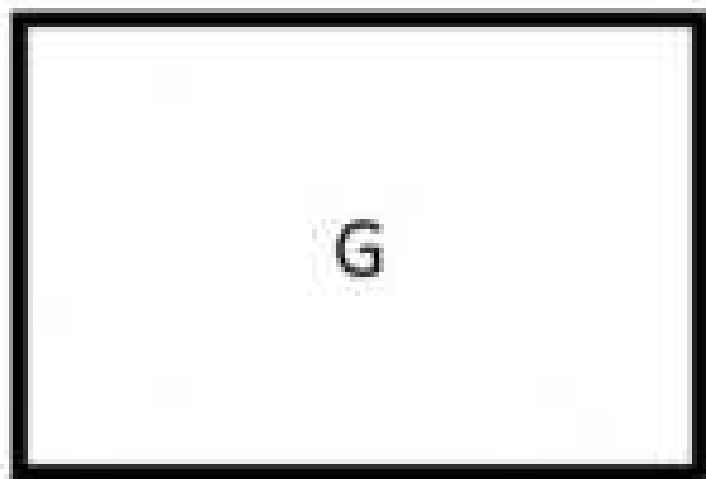
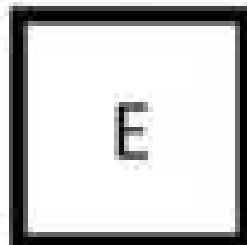
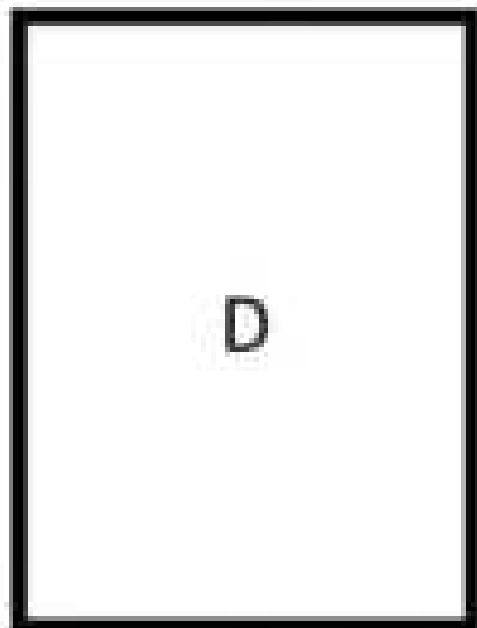
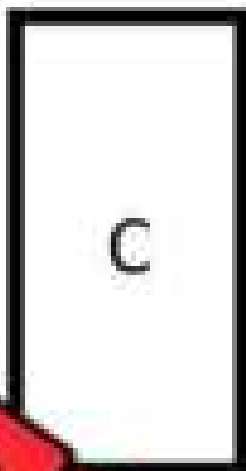
PREVIEW

Name: _____

Area

Instructions

Cut A out and find out many times it fits into the other shapes



Shape	# of Times
B	
C	
D	
E	
F	
G	
H	



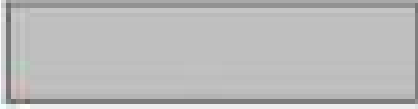
PREVIEW

Comparing Area - Ordering

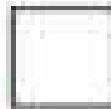
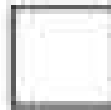
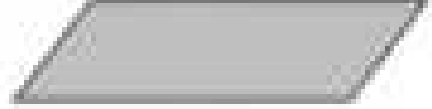
Questions

Order the area of the shapes from smallest (1) to largest (3)

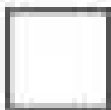
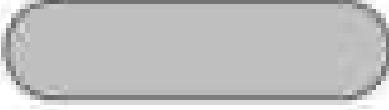
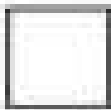
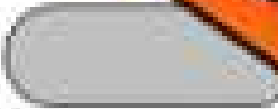
1)



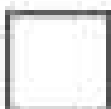
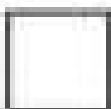
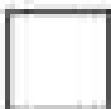
2)



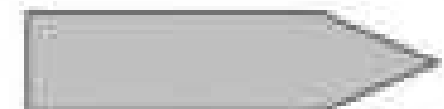
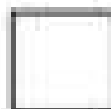
3)



5)



6)

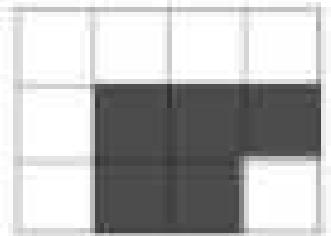


PREVIEW

Introduction to Area

Area is the amount of surface or space inside a two-dimensional region.

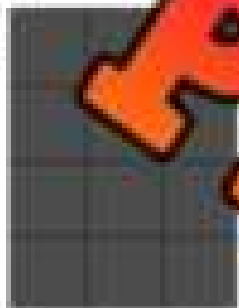
Example - The area of the shape is 5 square units.



Questions

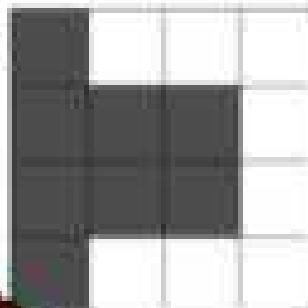
What is the area of the shape in square units?

1)



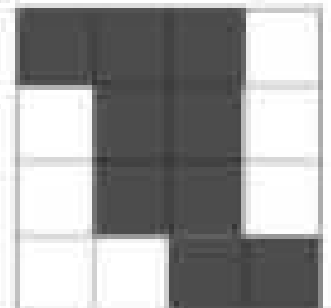
_____ squares

3)



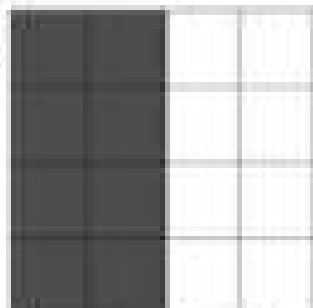
_____ squares

4)



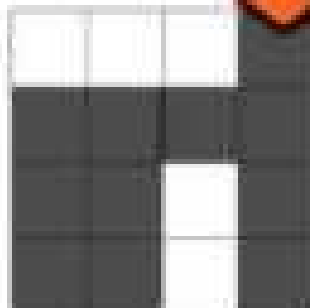
_____ squares

5)



_____ squares

6)



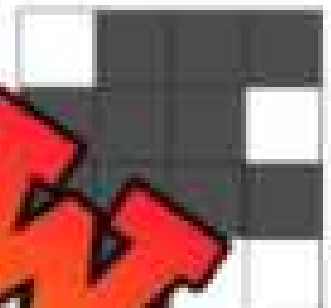
_____ squares

7)



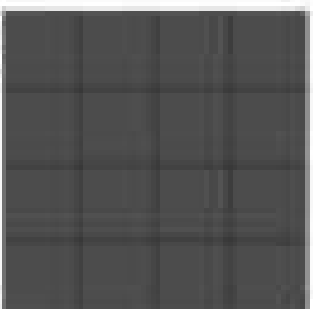
_____ squares

8)



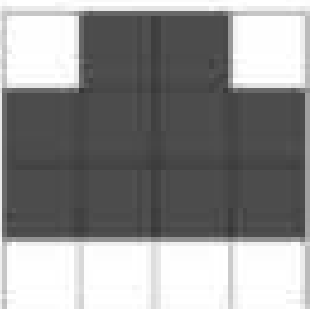
_____ squares

9)



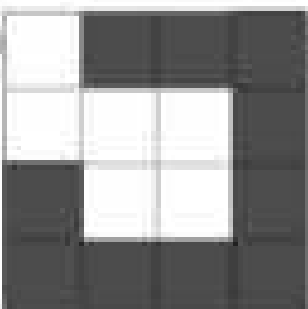
_____ squares

10)



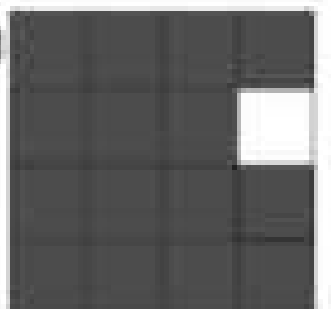
_____ squares

11)



_____ squares

12)

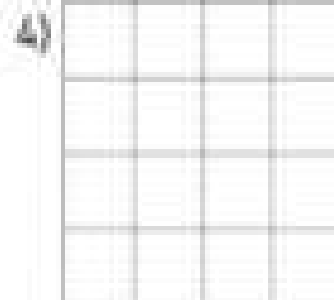
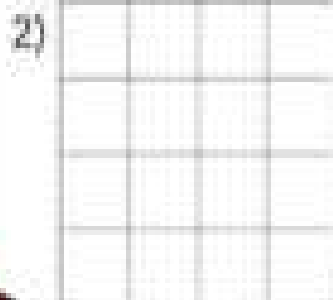
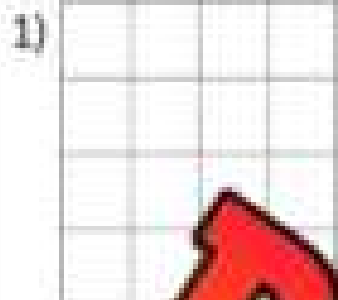


_____ squares

Introduction to Area

Questions

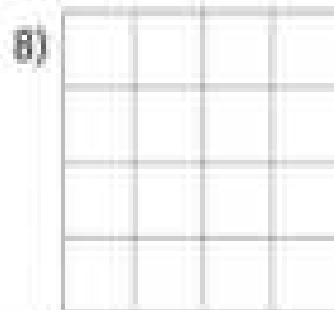
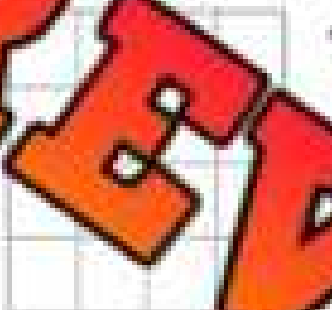
Shade in the area



5 square units

11 square units

10 square units

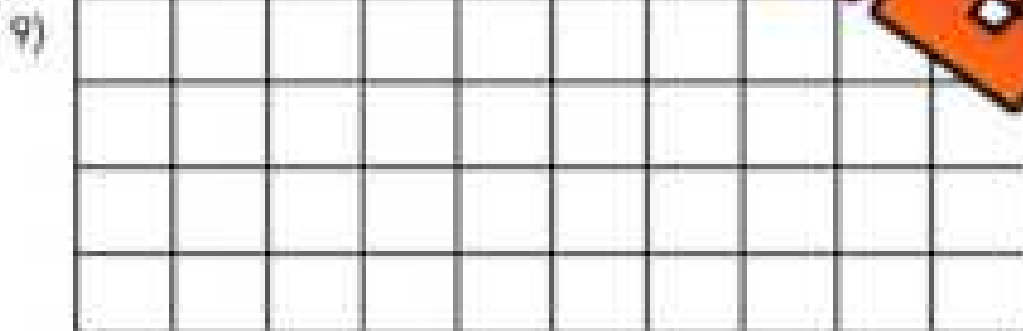


16 square units

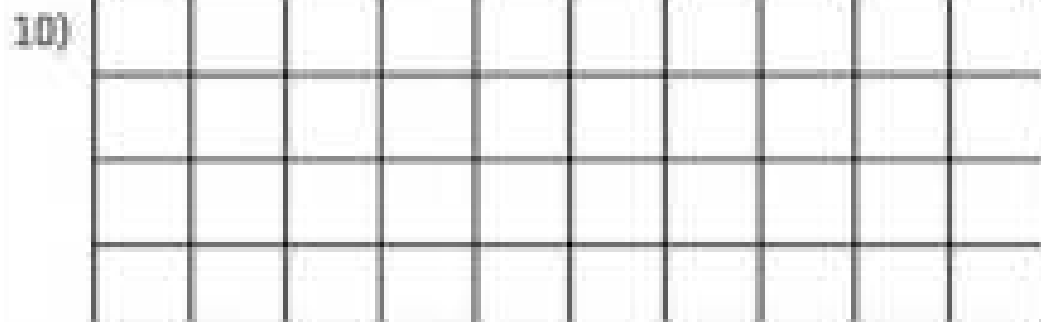
13 square units

square units

15 square units



2 square units

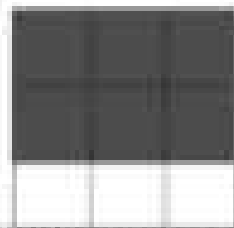


33 square units

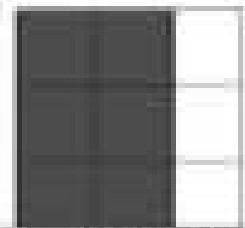
PREVIEW

Comparing Areas

The area of two shapes can be the same, but they may look different. The two shapes just need to take up the same amount of space.



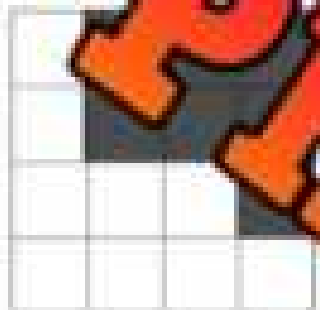
Area = 6 square units



Area = 6 square units

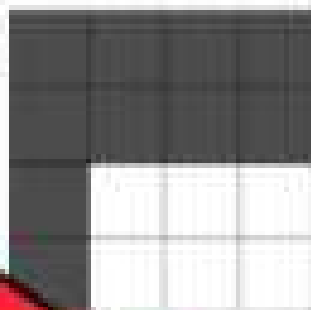
Question Draw a shape that has the same area but looks different.

1)

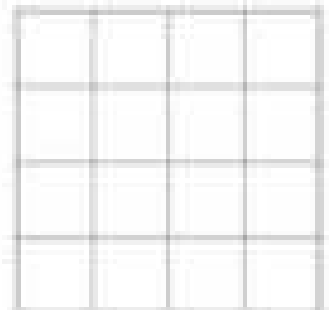


___ square units

2)

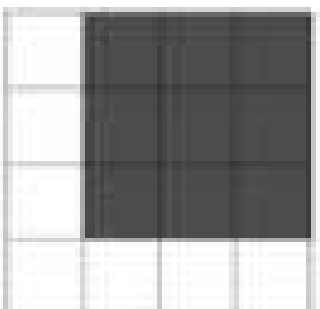


___ square units

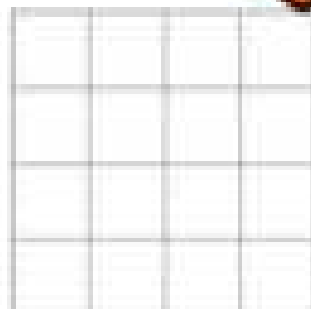


___ square units

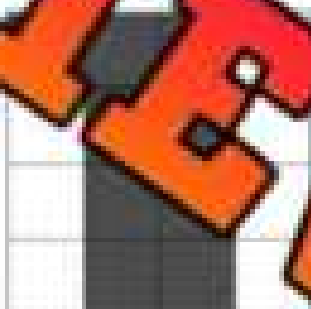
3)



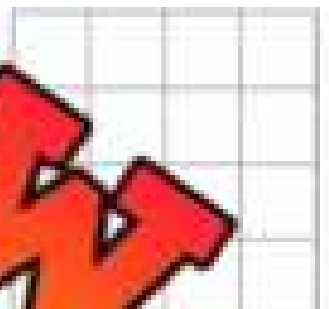
___ square units



___ square units

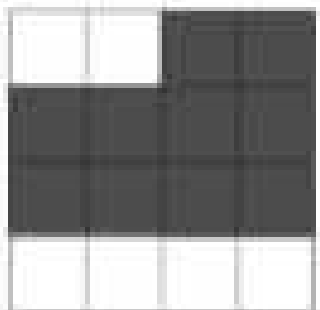


___ square units

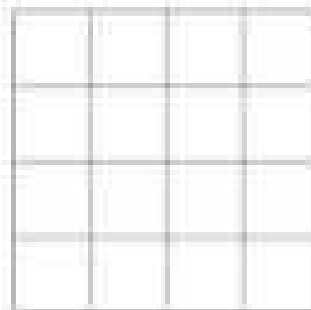


___ square units

5)

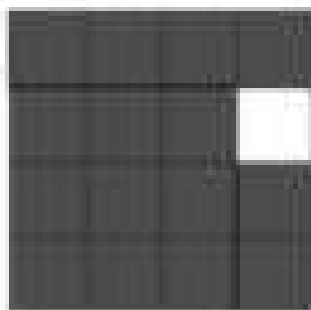


___ square units

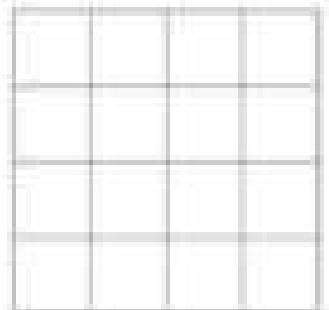


___ square units

6)



___ square units



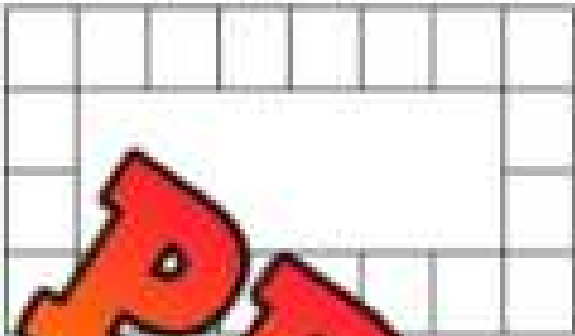
___ square units

Calculating Area Using CM

Questions

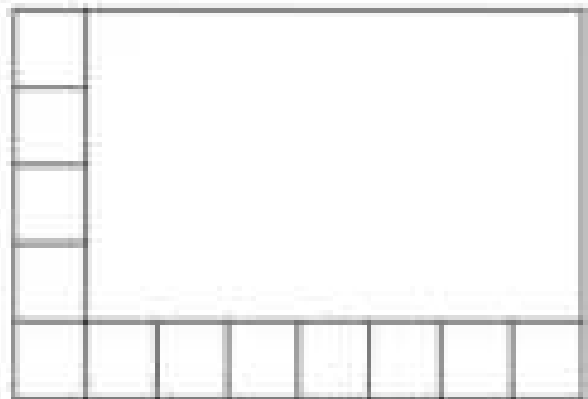
Predict the area of rectangles below

1)



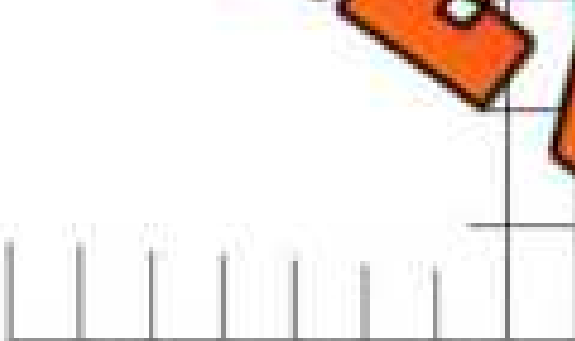
Area = _____

2)



Area = _____

3)

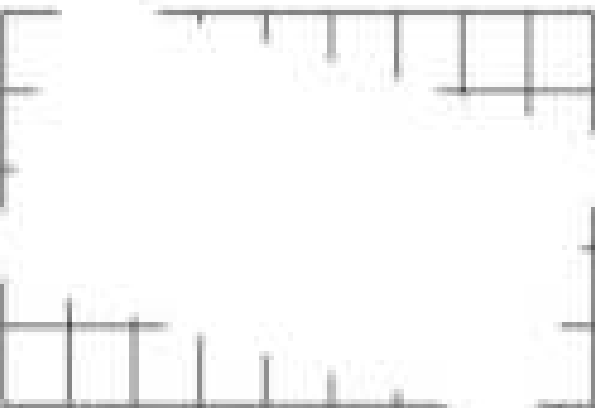


Area = _____



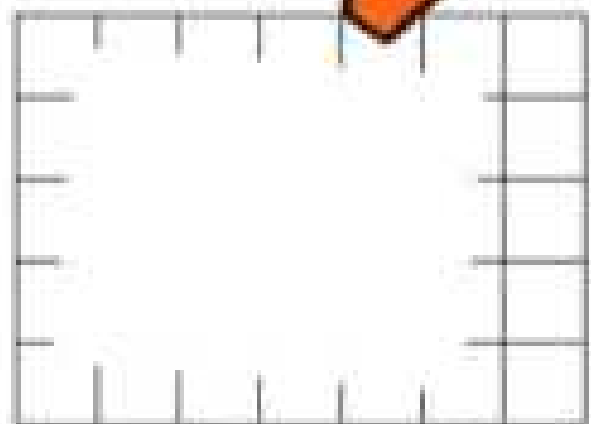
Area = _____

5)



Area = _____

6)

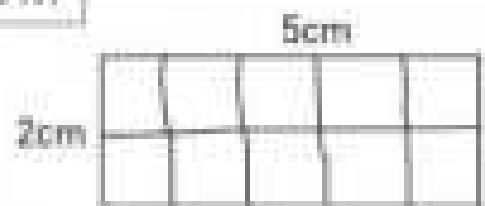


Area = _____

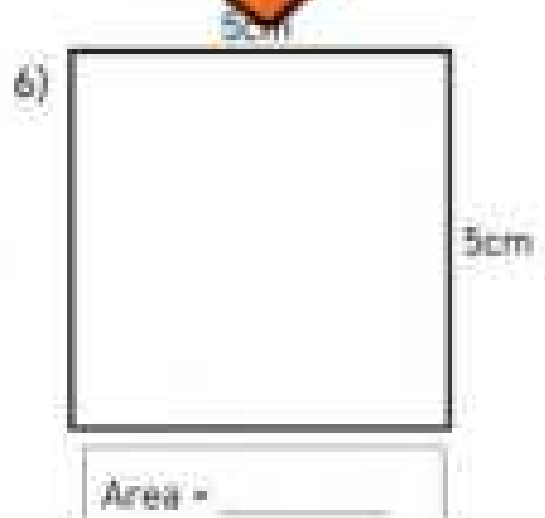
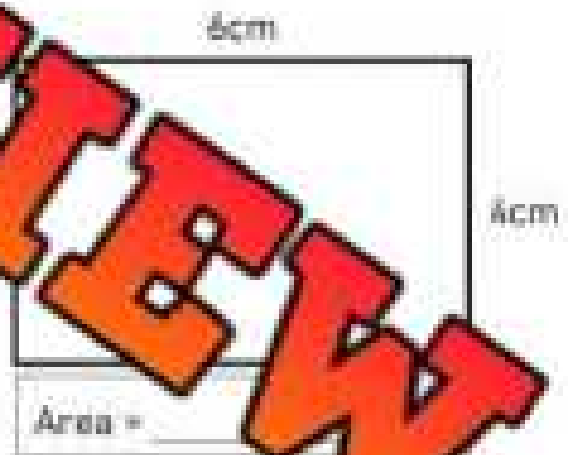
PREVIEW

Calculating Area Using CM

We can draw lines on shapes to segment them into cm squares. Try your best to make the squares equal.

**Questions**

Draw lines in the shapes below to create cm squares. Then count the squares.

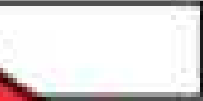


Exit Cards

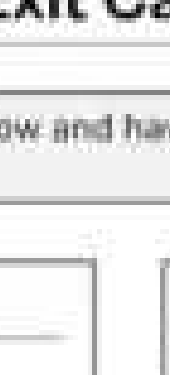
Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

Find the area ($A = b \times h$)

a) 


Area = _____

b) 

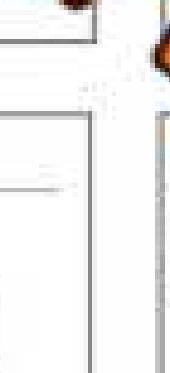
$A = b \times h$
 $A = \underline{\quad} \times \underline{\quad}$
 $A = \underline{\quad} \text{ m}^2$

Name: _____

Find the area ($A = b \times h$)

a) 


Area = _____

b) 

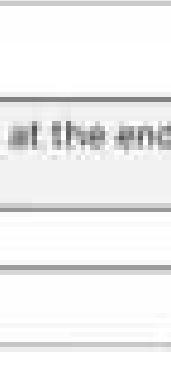
$A = b \times h$
 $A = \underline{\quad} \times \underline{\quad}$
 $A = \underline{\quad} \text{ m}^2$

Name: _____

Find the area ($A = b \times h$)

a) 


Area = _____

b) 

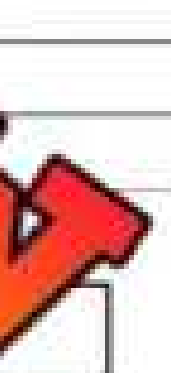
$A = b \times h$
 $A = \underline{\quad} \times \underline{\quad}$
 $A = \underline{\quad} \text{ m}^2$

Name: _____

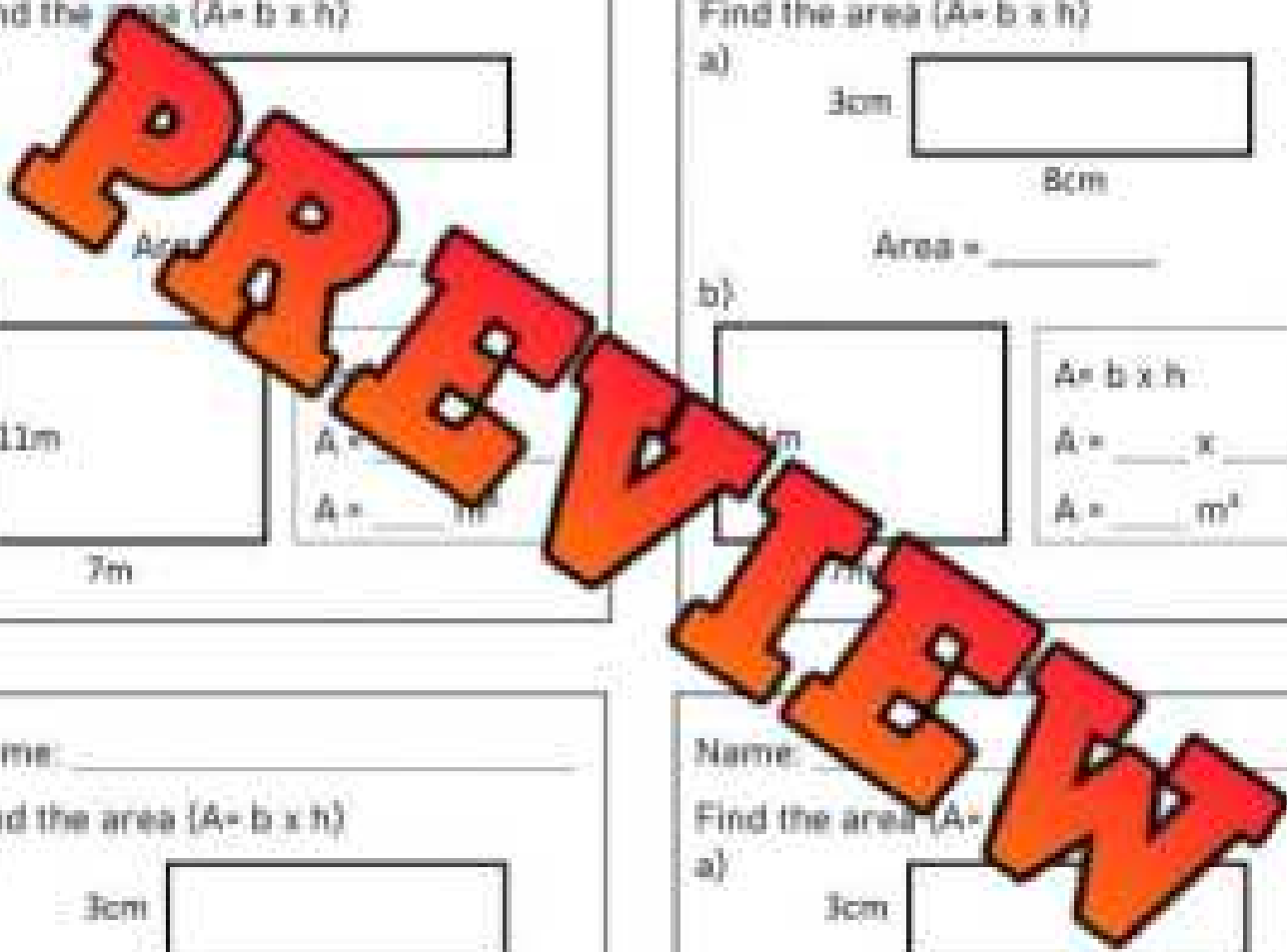
Find the area ($A = b \times h$)

a) 

Area = _____

b) 

$A = b \times h$
 $A = \underline{\quad} \times \underline{\quad}$
 $A = \underline{\quad} \text{ m}^2$

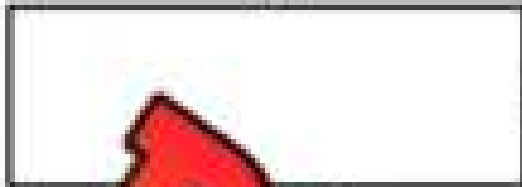


Finding the Area of Rectangles

QuestionsFind the area ($A = b \times h$)

1)

6m

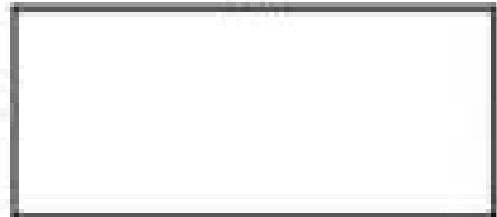


3m

Area = _____ m²

2)

10m

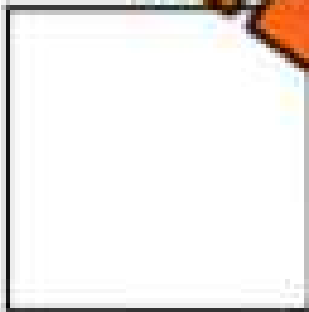


4m

Area = _____

3)

5m

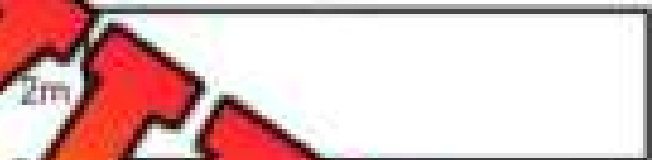


5m

Area = _____

4)

6m

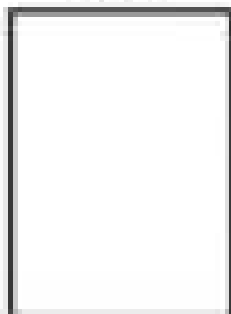


2m

Area = _____

5)

3m

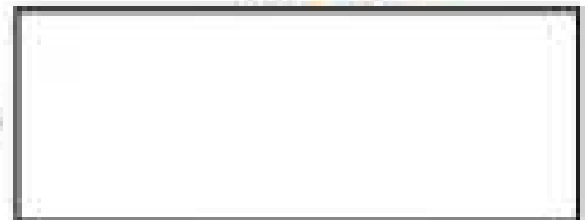


5m

Area = _____

6)

7m



3m

Area = _____

Finding the Area of Rectangles**Questions**Find the area ($A = b \times h$)

1)



Area = _____

2)



Area = _____

3)



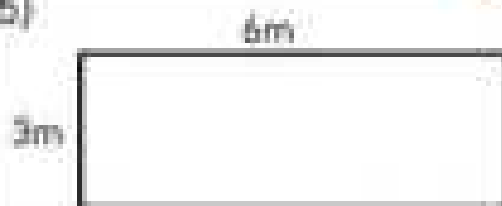
Area = _____

4)



Area = _____

5)



Area = _____

6)



Area = _____

7)



Area = _____

8)



Area = _____

9)



Area = _____

10)

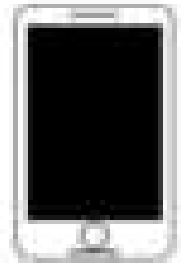


Area = _____

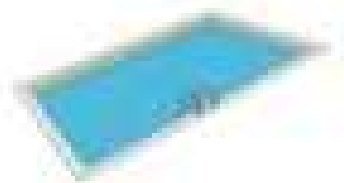
Area Word Problems**Questions**

Draw a picture of the problem and then find the area.

1) A phone is 10cm by 5cm. What is the area of the phone?



2) A pool is 10m by 5m. What is the area of the pool?



3) A door is 2m by 1m. What is the area of the door?



4) A square box is 10cm wide. What is the area of the box?



5) A candy wrapper is 2cm wide and 8cm long. What is the area of the wrapper?



Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class

Name: _____

1) Calculate the area. _____



2) A paper is 9cm tall and 6cm wide.
What is the area of the paper? _____

Name: _____

1) Calculate the area. _____



2) A paper is 9cm tall and 6cm wide.
What is the area of the paper? _____

Name: _____

1) Calculate the area. _____



2) A paper is 9cm tall and 6cm wide.
What is the area of the paper? _____

Name: _____

1) Calculate the area. _____

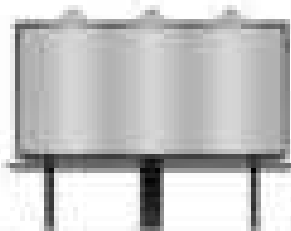


2) A paper is 9cm tall and 6cm wide.
What is the area of the paper? _____

PREVIEW

Area Word Problems**Questions**

Answer the questions below

	Word Problems	Answers
1	<p>A rectangular room is 9 metres long and 6 metres wide. If a square tile covers an area of 2 square metre, how many tiles will you need to cover the entire floor?</p>	
2	<p>Mike wants to cover a rectangular yard that measures 12 metres by 8 metres. A roll of sod covers an area of 4 square metres. How many rolls of sod does he need to buy?</p>	
3	<p>A rectangular billboard measures 5 metres in height and 10 metres in length. An advertiser wants to rent half of the billboard's space for a month. If the cost is \$20 per square metre per month, how much will the advertiser pay?</p> 	

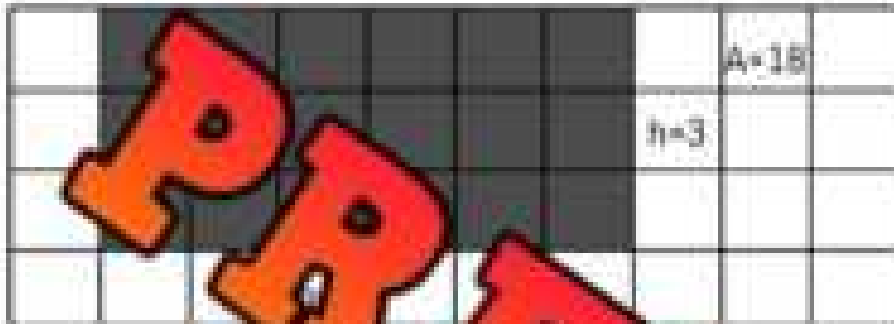
Finding the Missing Information - Visuals

To find the area of a rectangle, we need 2 of 3 pieces of information – base, height, and area. With the base and the height, we can find the area. With the area and the base, we can find the height and with the area and height, we can find the base.

Questions

Find the missing piece of information

1)



$$A = b \times h$$

$$18 = _ \times 3$$

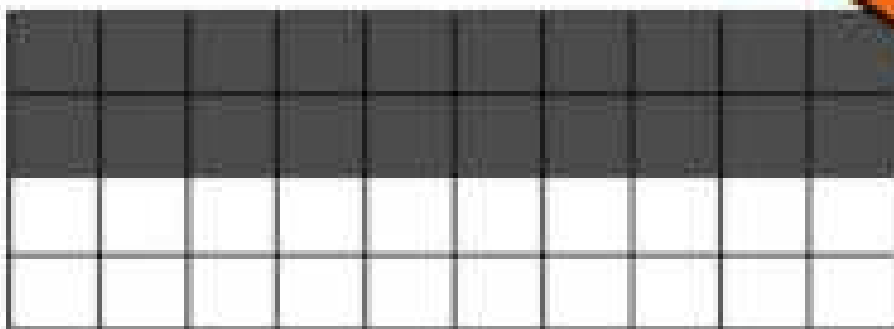
2)



$$A = b \times h$$

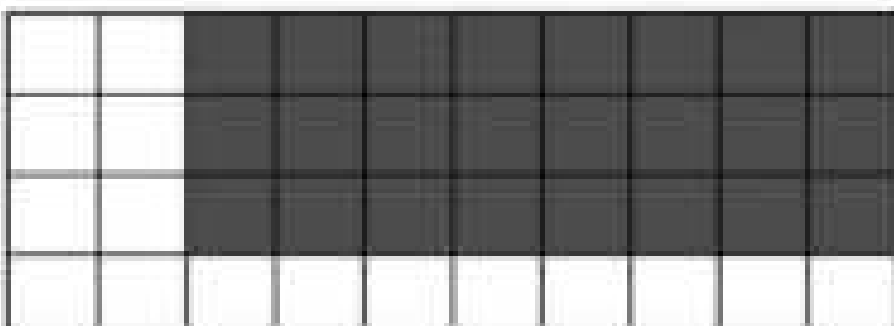
$$32 = 8 \times _$$

3)



$$20 = _ \times 2$$

4)



$$A = b \times h$$

$$24 = 8 \times _$$

Finding the Missing Information**Questions**Find the area ($A = b \times h$)

1)

$A = 25\text{cm}^2$

Base = _____

Height = _____

Area = _____

2)

3cm

$A = 15\text{cm}^2$

Base = _____

Height = _____

Area = _____

3)

$A = 32$

8cm

Base = _____

Height = _____

Area = _____

4)

10m

$A = 35\text{m}^2$

Base = _____

Height = _____

Area = _____

5)

3m

$A = 18\text{m}^2$

Base = _____

Height = _____

Area = _____

6)

4m

$A = 20$

Base = _____

Height = _____

Area = _____

7)

$A = 40\text{cm}^2$

8cm

Base = _____

Height = _____

Area = _____

8)

1m

$A = 8\text{m}^2$

Base = _____

Height = _____

Area = _____

9)

$A = 50\text{cm}^2$

10cm

Base = _____

Height = _____

Area = _____

10)

6cm

$A = 42\text{cm}^2$

Base = _____

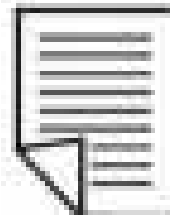
Height = _____

Area = _____

Finding the Missing Information – Word Problems**Questions**

Use the information you have to find the missing height or base.

1) A piece of paper has an area of 80cm^2 . The base of the paper is 8cm . What is the height of the paper?



2) A yard has an area of 72m^2 . The height of the yard is 9m . What is the base?

3) A bus has an area of 21m^2 . The height of the bus is 3m . What is the base?



4) A square poster has an area of 25cm^2 . What is the base and height?

5) A cookie sheet has an area of 48cm^2 . The base of the sheet is 6cm . What is the height of the cookie sheet?



Calculating Area - House



Questions

Calculate the area of the rooms in the house.

Room	Area
Garage	
Front Porch	
Living Room	
Entrance	
Hallway	
Dining Room	
Kitchen	
Balcony	

Room	Area
Back Deck	
Bathroom 1	
Bathroom 2	
Bathroom 3	
Bedroom 1	
Bedroom 2	
Bedroom 3	

Unit Quiz - Area

Part 1

Find the area

1)



Area = _____

2)



Area = _____

3)



Area = _____

4)



Area = _____

Part 2

Find the area ($A = b \cdot h$)

1)

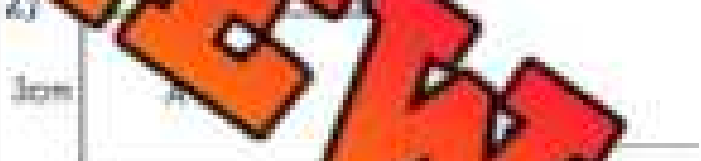


Base = _____

Height = _____

Area = _____

2)



Height = _____

Area = _____

3)



Base = _____

Height = _____

Area = _____

4)



Base = _____

Height = _____

Area = _____

Part 3

Solve the word problems below. Make sure to show your work.

1) A piece of paper is 8cm wide and 10cm tall. What is the area of the paper?

2) Henry's picture frame has an area of 56cm^2 . The frame has a base of 7cm. What is the height of the frame?

3) A bus has an area of 16m^2 . The height of the bus is 4m. What is the base?

Part 4

Answer the questions about centimetres squared.

1) What is a good referent for a cm^2 ?

2) Using the referent above, how many centimetres squared is this paper?

3) Using the referent above, how many cm^2 is your desk/tabletop?

4) Using the referent above, how many cm^2 is the average phone?

Measuring Angles

Questions

Measure the angles and label them acute, right or obtuse

1)



2)



3)



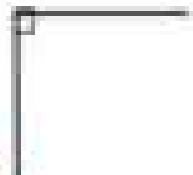
4)



5)



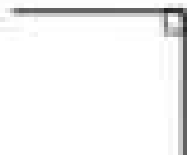
8)



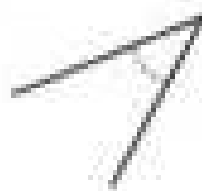
9)



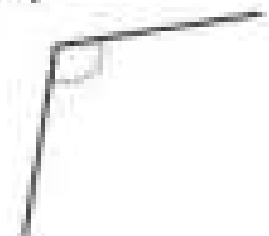
10)



11)





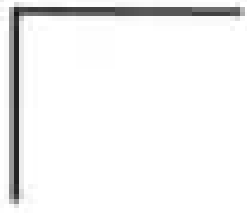
12)






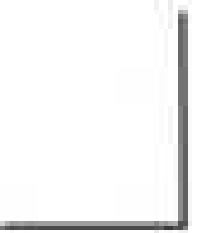
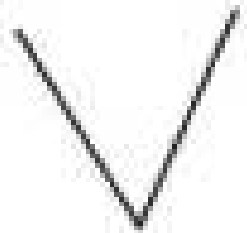


Naming Angles – Right, Obtuse, Acute, and Straight

Right Angle - 90° angle	Acute Angle - smaller than 90° angle	Obtuse Angle - larger than 90° angle	Straight Angle - A straight line
			

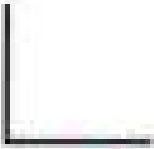


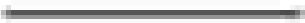
Question: Label the angle - straight, acute, obtuse, or right

2) 	3) 	4) 	
right acute obtuse	right acute obtuse	right acute obtuse	

5) 	6) 	7) 	
straight acute obtuse	right acute obtuse	right acute obtuse	right acute obtuse

9) 	10) 	11) 	12) 
right acute obtuse	right acute obtuse	right acute obtuse	right acute obtuse

Naming Angles – Right, Obtuse, Acute, and Straight

Right Angle - 90° angle	Acute Angle - smaller than 90° angle	Obtuse Angle - larger than 90° angle	Straight Angle - A straight line
			

Question Draw the acute, straight, obtuse, and right angles.

1)	3)	4)	
Acute	Obtuse	Straight	
5)	6)		
Obtuse	Right	Acute	Straight
9)	10)	11)	12)
Right	Acute	Obtuse	Straight

Constructing Angles - Estimating

Use your knowledge of obtuse, acute, and right angles to help you draw estimated angle measurements below. You can also use these angles to assist you with your estimations.

45°

90°

140°

180°



Part 1 Draw the angles below using the line provided

1)

 $\angle = 50^\circ$

3)

 $\angle = 130^\circ$

Part 2

Draw the angles below

1)

 $\angle = 80^\circ$

2)

 $\angle = 70^\circ$ $\angle = 165^\circ$

4)

 $\angle = 120^\circ$

5)

 $\angle = 30^\circ$

6)

 $\angle = 140^\circ$

Analyzing Angles – Estimating – Multiple Choice

Instructions

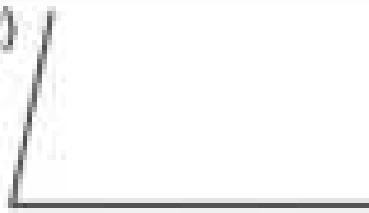
Circle which angle you think it is. Do not use a protractor.

1)



- a) $\angle = 15^\circ$
b) $\angle = 45^\circ$
c) $\angle = 75^\circ$
d) $\angle = 90^\circ$

2)



- a) $\angle = 95^\circ$
b) $\angle = 100^\circ$
c) $\angle = 80^\circ$
d) $\angle = 120^\circ$

3)



- a) $\angle = 168^\circ$
b) $\angle = 50^\circ$
c) $\angle = 120^\circ$
d) $\angle = 12^\circ$

4)



- a) $\angle = 74^\circ$
b) $\angle = 170^\circ$
c) $\angle = 30^\circ$
d) $\angle = 106^\circ$

6)



- a) $\angle = 37^\circ$
b) $\angle = 30^\circ$
c) $\angle = 143^\circ$
d) $\angle = 157^\circ$

7)



- a) $\angle = 95^\circ$
b) $\angle = 54^\circ$
c) $\angle = 110^\circ$
d) $\angle = 160^\circ$

8)



- a) $\angle = 60^\circ$
b) $\angle = 120^\circ$
c) $\angle = 10^\circ$
d) $\angle = 160^\circ$

9)

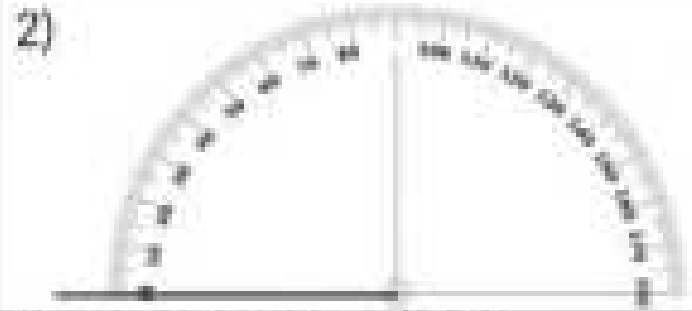


- a) $\angle = 171^\circ$
b) $\angle = 9^\circ$
c) $\angle = 50^\circ$
d) $\angle = 85^\circ$

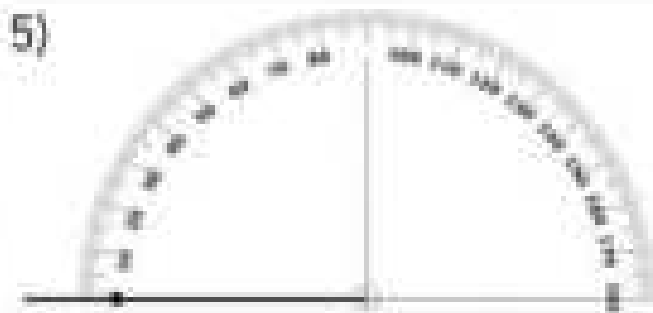
Constructing Angles – Printed Protractor

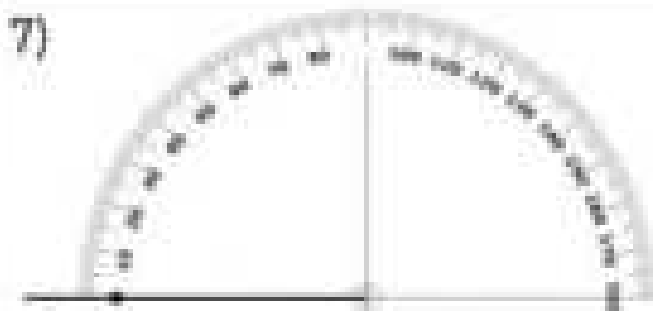
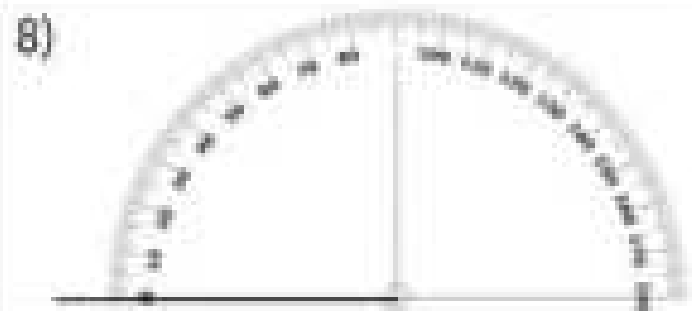
Instructions

Construct the angles and label them acute, right or obtuse


 Angle = $\angle = 35^\circ$ Type of Angle = _____

 Angle = $\angle = 110^\circ$ Type of Angle = _____

 Angle = $\angle = 42^\circ$ Type of Angle = _____

 Angle = $\angle = 105^\circ$ Type of Angle = _____

 Angle = $\angle = 124^\circ$ Type of Angle = _____

 Angle = $\angle = 168^\circ$ Type of Angle = _____

 Angle = $\angle = 49^\circ$ Type of Angle = _____

 Angle = $\angle = 173^\circ$ Type of Angle = _____

PREVIEW


Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class

Name: _____

Construct the angle and label it.

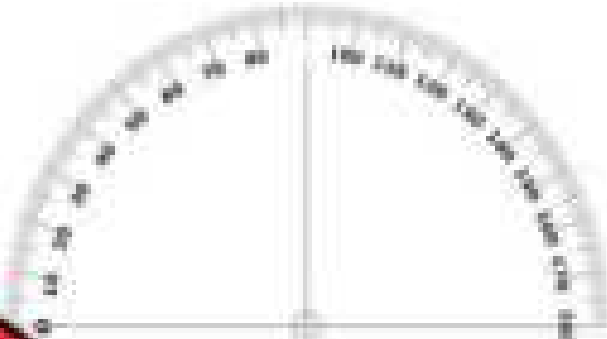


Angle = $\angle = 175^\circ$

Type of Angle = _____

Name: _____

Construct the angle and label it.

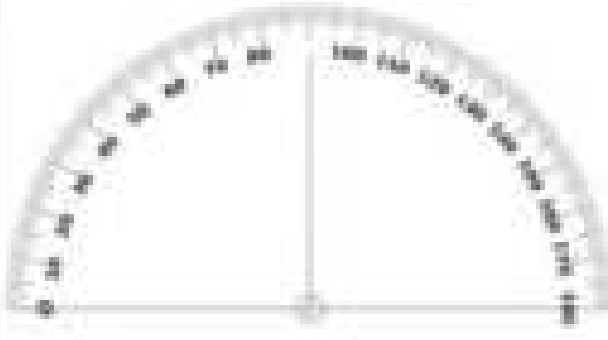


Angle = $\angle = 175^\circ$

Type of Angle = _____

Name: _____

Construct the angle and label it.




Angle = $\angle = 175^\circ$

Type of Angle = _____

Name: _____

Construct the angle and label it.



Angle = $\angle = 175^\circ$

Type of Angle = _____

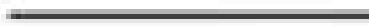
PREVIEW

Constructing Angles**Part 1** Use a protractor to draw the angles below using the line provided

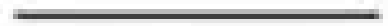
1)

 $\angle =$

2)

 $\angle = 70^\circ$

3)

 $\angle = 120^\circ$ **Part 2** Use a protractor to draw the angles below

1)

 $\angle = 95^\circ$

2)

 $\angle = 115^\circ$

3)

4)

 $\angle = 60^\circ$

5)

 $\angle = 25^\circ$

6)

 $\angle = 170^\circ$

Constructing Angles - Estimating

Use your knowledge of obtuse, acute, and right angles to help you estimate the angle measurements below. You can also use these angles to assist you with your estimations.

45°

90°

140°

180°



Part 1 Estimate the angles below using the line provided without a protractor.

1)

 $\angle = 50^\circ$

3)

 $\angle = 130^\circ$

Part 2 Draw the angles below without using a protractor.

1)

 $\angle = 80^\circ$

2)

 $\angle = 70^\circ$ $\angle = 165^\circ$

4)

 $\angle = 120^\circ$

5)

 $\angle = 30^\circ$

6)

 $\angle = 140^\circ$

Constructing Triangles

Questions

Draw triangles below that fit the description

1)

1 angle at 60° 1 angle at 60° 1 angle at 60°

2)

1 angle at 90° 1 angle at 90° 1 angle at 40°

3)

1 angle at 100° 1 angle at 35° 1 angle at 45°

4)

1 angle at 80° 1 angle at 80° 1 angle at 20°

5)

1 angle at 40° 1 angle at 30° 1 angle at 110° 1 angle at 55° 1 angle at 75° 1 angle at 50°

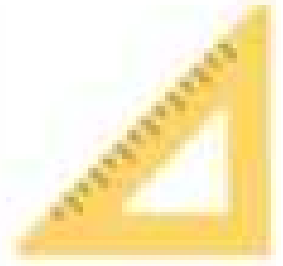
Measuring Angles



Acute Triangle - All angles are acute.

Obtuse Triangle - One angle is obtuse.

Right Triangle - One right angle.



Instruction: Measure the angles and label the triangles: Acute, Obtuse, or Right.

1)

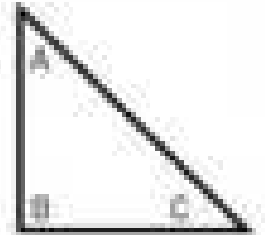
 $\angle A =$ $\angle B =$ $\angle C =$

Obtuse Triangle

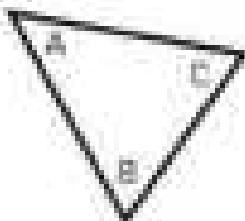
3)

 $\angle A =$ $\angle B =$ $\angle C =$

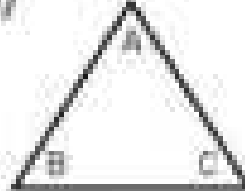
4)

 $\angle A =$ $\angle B =$ $\angle C =$

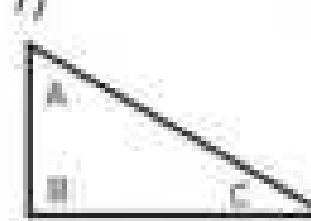
5)

 $\angle A =$ $\angle B =$ $\angle C =$

6)

 $\angle A =$ $\angle B =$ $\angle C =$





7)

 $\angle A =$ $\angle B =$ $\angle C =$  $\angle A =$ $\angle B =$ $\angle C =$

Relating Angles to Fractions of a Circle

A full circle is 360° . When you jump and spin in a full circle, you have done a 360° spin. As a fraction, we can say you have jumped $\frac{360}{360}$. If you jumped halfway so that you are facing the opposite direction as you started, you have done a 180° spin. This can be written as the fraction $\frac{180}{360}$ because you jumped 180 degrees out of 360 degrees.

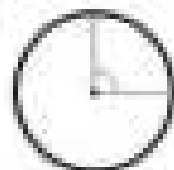
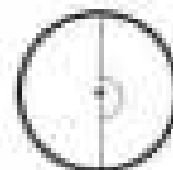


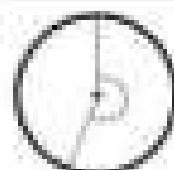
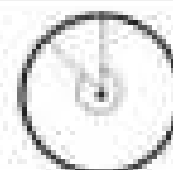
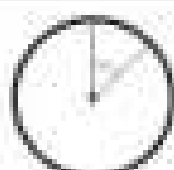
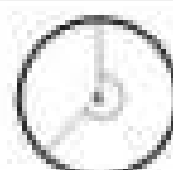
More Examples:

360° 	270° 	180° 	90° 
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Part 1 Write each angle as a fraction out of a full spin (360°)

	Fraction
1) A snowboarder jumps a half circle and lands backwards	
2) A skateboarder does a full spin and lands in the same direction	
3) Mark spins as far as he can. He lands after a half spin, completing the full spin	
4) Jen spins a wheel. It doesn't move much, only a quarter spin	

Part 2 Measure the angle and write it as a fraction out of 360

1) 	2) 	3) 	4) 
Answer: $\frac{90}{360}$	Answer: $\frac{180}{360}$	Answer: $\frac{270}{360}$	Answer: $\frac{45}{360}$
5) 	6) 	7) 	8) 
Answer: $\frac{135}{360}$	Answer: $\frac{225}{360}$	Answer: $\frac{315}{360}$	Answer: $\frac{15}{360}$

Unit Quiz - Measurement

Part 1

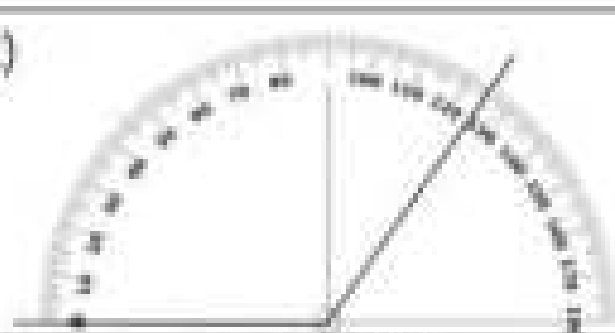
Measure the angles and label them acute, right or obtuse

1)



Angle = _____

2)



Angle = _____ Type of Angle = _____

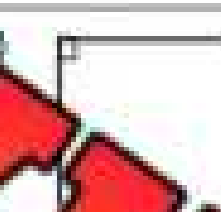
Part 2

Measure the angles and label them acute, right, or obtuse

1)



2)



4)



5)



6)



7)



Part 3

Use a protractor to draw the angles below using the line provided

1)

 $\angle = 60^\circ$

2)

 $\angle = 98^\circ$

3)

 $\angle = 147^\circ$


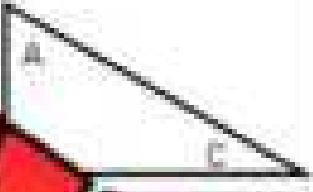

Part 4

Use a protractor to draw the angles below.

1)	2)	3)
$\angle = 127^\circ$	$\angle = 93^\circ$	$\angle = 145^\circ$

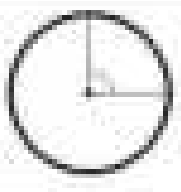
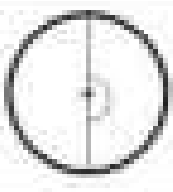


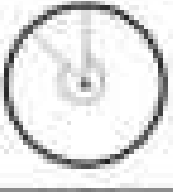

Part 5

Measure the angles and label the triangles acute, obtuse, or right.

1)	2)	3)	4)
			
$\angle A =$	$\angle A =$	$\angle A =$	
$\angle B =$	$\angle B =$	$\angle B =$	
$\angle C =$	$\angle C =$	$\angle C =$	

Part 6

Measure the angle and write it as a fraction of a circle.

1)	2)	3)
		
Answer	Answer	Answer
4)	5)	6)
		
Answer	Answer	Answer

Telling Time – Digital Clocks

A **digital clock** tells us what time it is using numbers. The first number before the colon tells us what hour it is. The second set of numbers tells us how many minutes have passed the hour.

Examples

7:20

Hour = 7 Minutes = 20

2:47

Hour = 2 Minutes = 47

Part 1

Fill in the answers below – Hours and Minutes

1)

Hour = _____

Minutes = _____

2)

1:58

Hour = _____

Minutes = _____

3)

9:28

Hour = _____

Minutes = _____

4:37

Hour = _____

Minutes = _____

5)

11:42

Hour = _____

Minutes = _____

6)

Hour = _____

Minutes = _____

Part 2

Fill in the answers below – Hours, Minutes and Seconds

Example

10:24:18

Hour = 10 Minutes = 24 Seconds = 18

1)

3:17:12

Hour = _____

Minutes = _____

Seconds = _____

2)

12:43:35

Hour = _____

Minutes = _____

Seconds = _____

3)

9:12:38

Hour = _____

Minutes = _____

Seconds = _____

4)

5:23:02

Hour = _____

Minutes = _____

Seconds = _____

Digital Clocks – How Much Time Has Elapsed

Questions

Read the digital clocks. How much time has gone by?

Start Time	End Time	How Much Time Has Passed?	
		Hours	Minutes
4:00	7:15	3	15
1:00	5:27		
3:00			
5:02	10:12		
7:24	11:31		
4:00	9:59		
6:35	11:48		

PREVIEW

Digital Clocks – How Much Time Has Elapsed

Questions

Read the digital clocks. How many minutes/seconds have gone by?

Start Time	End Time	How Much Time Has Passed?	
3 : 11 : 12	3 : 17 : 20	Minutes	6
		Seconds	8
7 : 02 : 15	7 : 05 : 22	Minutes	
		Seconds	
3 : 10 : 08	3 : 11 : 11	Minutes	
		Seconds	
5 : 48 : 36	5 : 59 : 11	Minutes	
		Seconds	
8 : 17 : 38	8 : 22 : 55	Minutes	
		Seconds	
7 : 44 : 22	7 : 52 : 53	Minutes	
		Seconds	
1 : 21 : 14	1 : 39 : 48	Minutes	
		Seconds	

Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

1) How many minutes/seconds have gone by?

Start Time	End Time	How Much Time Has Passed?	
3:15:56	3:45:59	Minutes	
		Seconds	
12:07:22	12:22:28	Minutes	
		Seconds	
9:33:10	9:48:29	Minutes	
		Seconds	

Name: _____

1) How many minutes/seconds have gone by?

Start Time	End Time	How Much Time Has Passed?	
3:15:56	3:45:59	Minutes	
		Seconds	
12:07:22	12:22:28	Minutes	
		Seconds	
9:33:10	9:48:29	Minutes	
		Seconds	

Name: _____

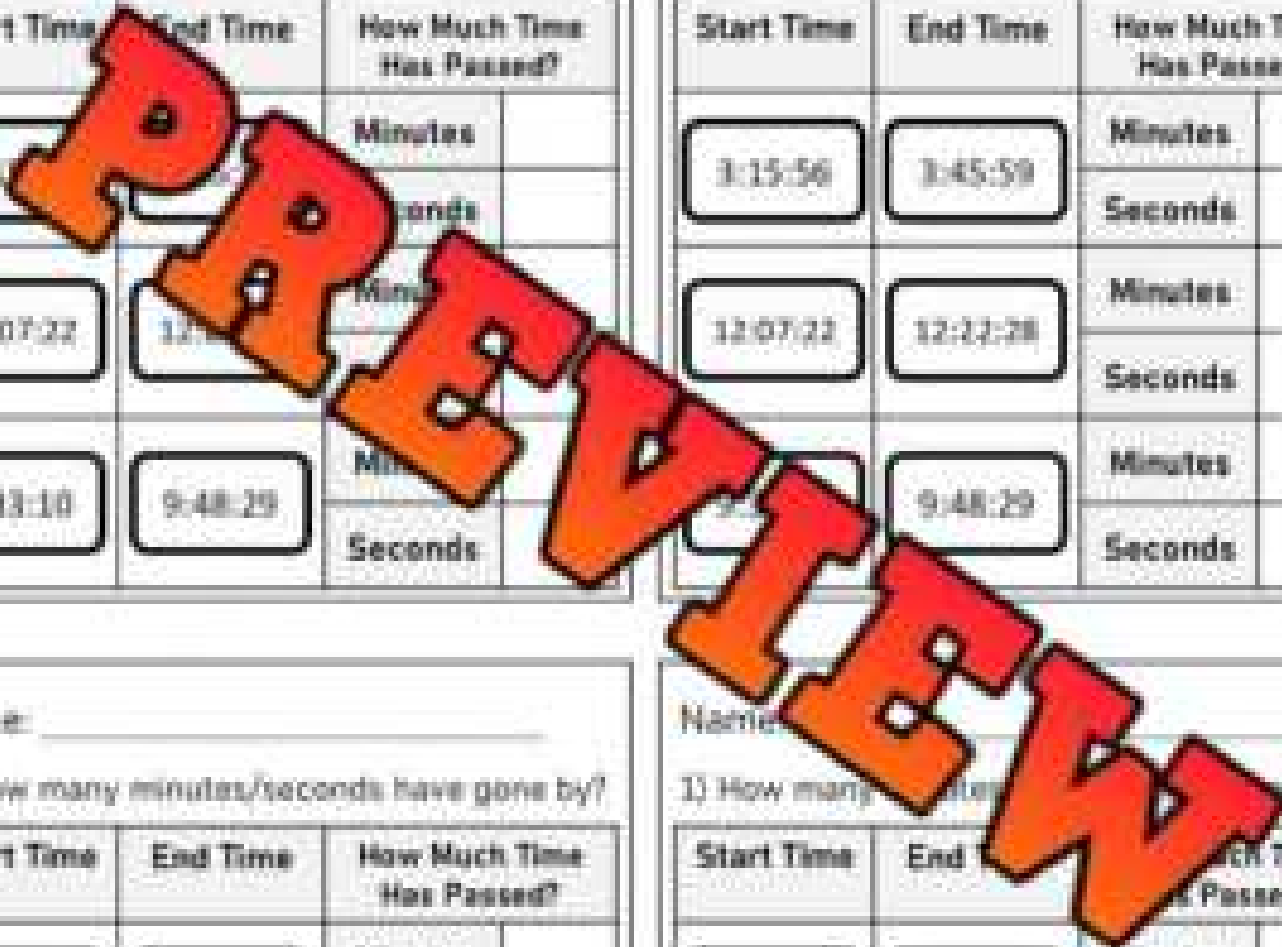
1) How many minutes/seconds have gone by?

Start Time	End Time	How Much Time Has Passed?	
3:15:56	3:45:59	Minutes	
		Seconds	
12:07:22	12:22:28	Minutes	
		Seconds	
9:33:10	9:48:29	Minutes	
		Seconds	

Name: _____

1) How many minutes/seconds have gone by?

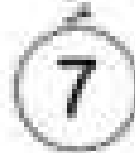
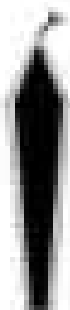
Start Time	End Time	How Much Time Has Passed?	
3:15:56	3:45:59	Minutes	
		Seconds	
12:07:22	12:22:28	Minutes	
		Seconds	
9:33:10	9:48:29	Minutes	
		Seconds	



Making a Clock

Directions

Cut out the parts of the clock and paste them in the right spots.



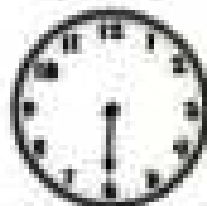
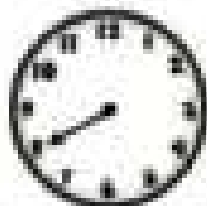
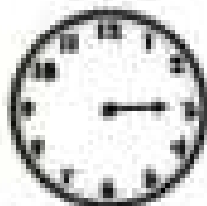
Analog Clock

An analog clock tells us what time it is. The short hand tells us what hour it is. When the hour hand moves around, it goes up by 1 each time. The long hand tells us how many minutes have gone by in the hour. The long hand goes up by 5 minutes at each interval.

Part 1: Fill in the minutes around the clock. Then label the hour and minute hand.



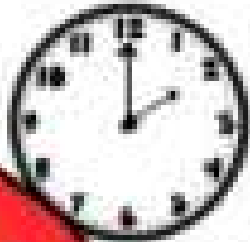
Part 2: How many minutes have gone by in the hour?



Telling Time – Nearest Hour**Questions**

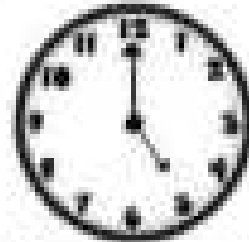
What time is it? Write the times on the digital clocks below

1)



:00

2)



:00

3)



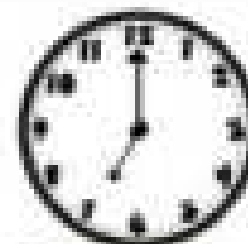
:00

4)



:00

5)



:00

6)



:00

7)



:00

8)













:00

How Many Hours Have Passed ?

Questions

How many hours have gone by?

Start Time	End Time	How Much Time Has Passed?
1)  : : :	 : : :	_____ Hours
2)  : : :	 : : :	_____ Hours
3)  : : :	 : : :	_____ Hours
4)  : : :	 : : :	_____ Hours
5)  : : :	 : : :	_____ Hours

PREVIEW

Telling Time – Half Past

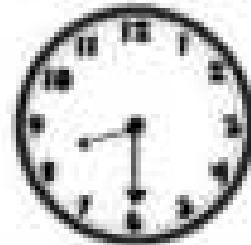
Questions

What time is it? Write the times on the digital clocks below

1)



2)



3)



4)



5)



6)



7)



8)



PREVIEW

Telling Time - Quarter To, Quarter After



Quarter To



Quarter After

Questions

Is the time - Quarter To or Quarter After? Circle the answer

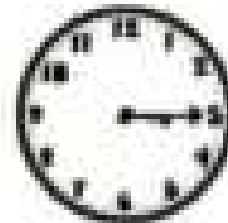
1)



Quarter To

Quarter After

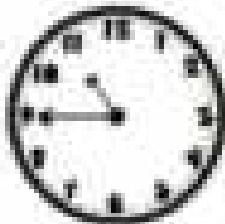
2)



Quarter To

Quarter After

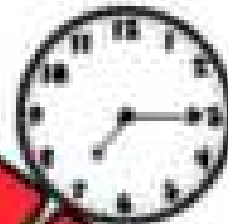
3)



Quarter To

Quarter After

4)



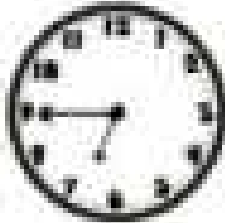
Quarter To

Quarter After

Quarter To

Quarter After

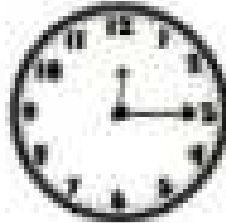
5)



Quarter To

Quarter After

6)



Quarter To

Quarter After

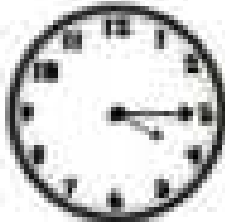
7)



Quarter To

Quarter After

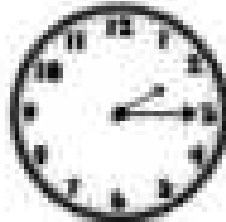
8)



Quarter To

Quarter After

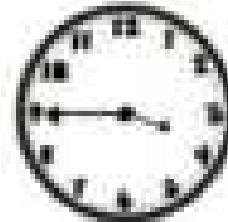
9)



Quarter To

Quarter After

10)



Quarter To

Quarter After

Drawing Clocks – Quarter To, Quarter After

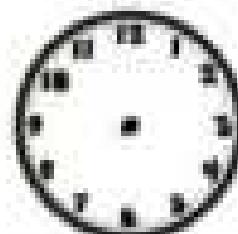
Questions

Draw the hour and minute hand to show what time it is

1)



2)



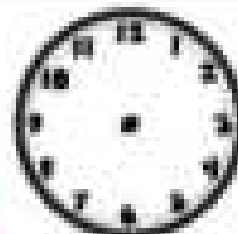
2:15

3)



4:15

4)



6:15

5)



5:45

6)



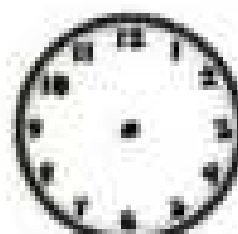
3:15

7)



8:45

8)



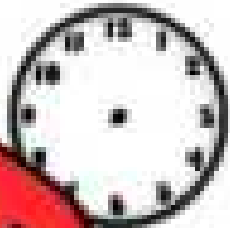
7:45

PREVIEW

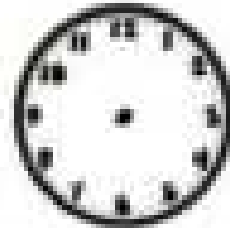
Telling Time – Every 5 Minutes**Questions**

Draw the hour and minute hands on the clocks below

1)



2)



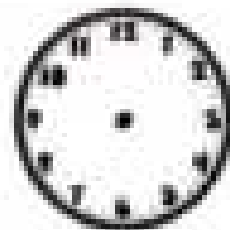
4:35

3)



6:20

4)



7:05

5)



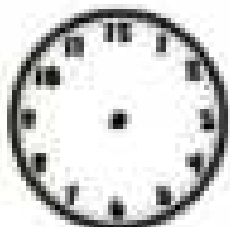
9:55

6)



11:25

7)



8:10

8)



10:40

PREVIEW

Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class

Name: _____

1) What time is it?

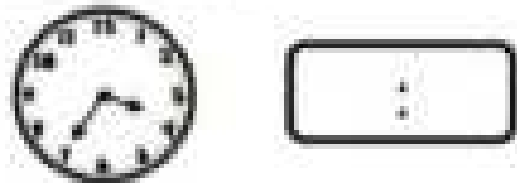


2) Draw the time on the clock: 5:15



Name: _____

1) What time is it?

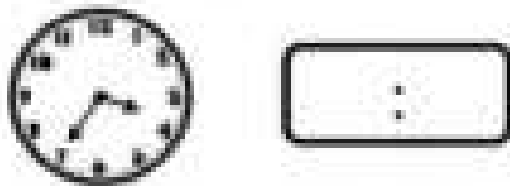


2) Draw the time on the clock: 5:15

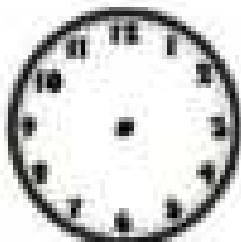


Name: _____

1) What time is it?



2) Draw the time on the clock: 5:15



Name: _____

1) What time is it?



2) Draw the time on the clock: 5:15



Matching Game: Telling Time To The Nearest Minute

Objective

What are we learning about?

To help students practice telling time to the nearest minute by matching digital times to their analog counterparts.

Materials: _____ you will need for the activity.

- Pre-prepared matching game cards with digital and analog times.
- Small bags or envelopes for each group.



Instructions

How you will complete the activity.

1. Before the class, the teacher will cut out the prepared matching game cards.
2. Divide the students into small groups and give each group a small envelope containing a set of the matching cards.
3. In their groups, students will spread out the cards face down on their table.
4. Each person takes a turn to try to match two cards - one digital time with its matching analog clock.
5. If they find a correct match, they keep the cards out and continue with their next turn. If the cards don't match, they turn them back over in the same place, and the next player takes a turn.
6. The activity continues until all pairs are correctly matched within each group.

Cards

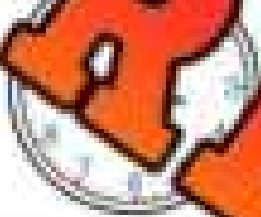
Matching Game Cards

Analog Clock

Digital Clock



12:21



3:44



4:17



5:52








12:53

PREVIEW

Cards

Matching Game Cards

Analog Clock	Digital Clock
	9:01
	4:50
	1:17
	2:27
	10:58

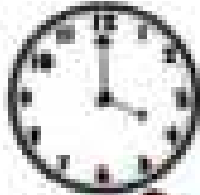
PREVIEW

Elapsed Time – Half Past

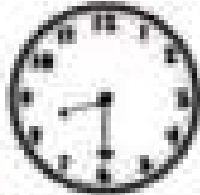
Part 1

How much time has gone by from the first clock to the second clock?

1)



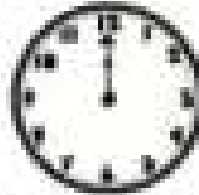
4:00



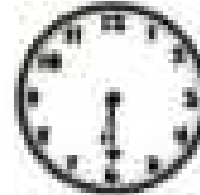
8:30

4 hrs
30 mins

2)



12:00



6:30

3)



7:00



4)



6:00

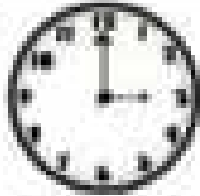


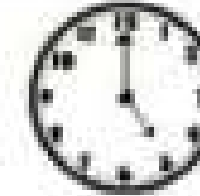
8:00

Part 2

What time is it? How much time has gone by from the first clock to the next?

1)



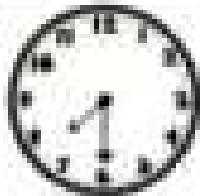


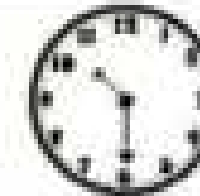
2)





3)



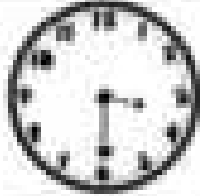


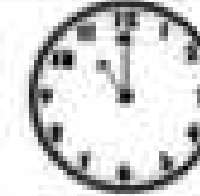
4)



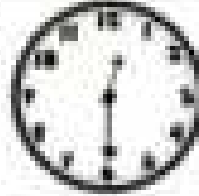


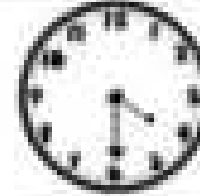
5)





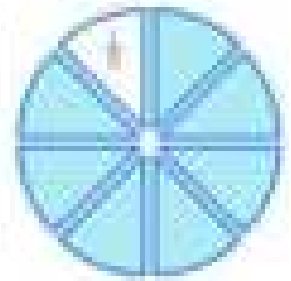
6)





Elapsed Time Using Fractions

We can use fractions to explain how much time has elapsed. When using fractions, we use one hour as the whole. For example, if an event took 3 hours and 30 minutes, we could say it took $3\frac{1}{2}$ hours. If it took 2 hours and 20 minutes, we could say it took $2\frac{1}{3}$ hours.



Part 1 Write the fraction for the elapsed time

Elapsed Time	Fraction	Elapsed Time	Fraction
30 minutes	$\frac{1}{2}$ hour	20 minutes	
15 minutes		40 minutes	
45 minutes		75 minutes	

Part 2 Write the fraction for the elapsed time

Elapsed Time	Fraction	Elapsed Time	Fraction
1 hour 30 minutes	$1\frac{1}{2}$ hours	4 hours 15 minutes	
2 hours 15 minutes		6 hours 20 minutes	
5 hours 45 minutes		120 minutes	

Part 3 Write the fraction for the elapsed time



Elie studied from 5:15 pm to 7:30 pm for a test. How many hours did she study?

Measuring Time – Seconds, Days, Hours, Minutes

Seconds (sec)	Minutes (min)	Hours (hr)	Days (d)
60 seconds = 1 minute	60 minutes = 1 hour	24 hours = 1 day	1 day = 24 hours



Part 1 Fill in the tables below

Seconds	Minutes	Minutes	Hours	Hours	Days
60		60	1	24	1
			2	48	2
		180		72	
					4
300			5		5
360				144	
420				168	
	8	480			8
	9	540			9
600					

Part 2 Convert the units of measurement below

1) 1 hr	_____ min	5) 240 mins	_____ hrs	9) 5 d	_____ hrs
2) 240 sec	_____ min	6) 72 hrs	_____ d	10) 360 min	_____ hrs
3) 180 sec	_____ min	7) 540 mins	_____ hr	11) 240 hrs	_____ d
4) 2 d	_____ hr	8) 168 hrs	_____ d	12) 480 mins	_____ hrs

Elapsed Time Using Timelines – Word Problems

Questions

Use the timeline to solve the problems below. The first one is done for you.

1) Chris went skiing at 1:05pm. He went home at 6:25pm. How long did he ski for?



Answer:

55m +

1h 25m +

3hr =

5hr 15m

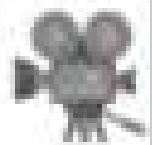
2) Kevin ran a triathlon. He started at 8:10am and finished at 2:30pm. How long did it take him to finish the triathlon?



3) Becca drove from Regina to Saskatoon. She started at 9:00am and arrived at 10:10am. How long was the drive?





4) One of the longest movies ever made is 5 hours and 25 minutes. If you started the movie at 1:15pm, what time would it finish?


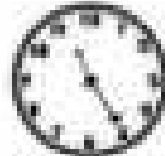


Elapsed Time Using Timelines**Questions**

How much time has gone by from the first clock to the second clock?

1)  
4:15 5:55


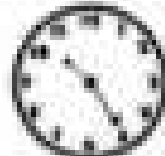
Answer _____

2)  
2:15 11:25



Answer _____

3)  
3:50 7:00


Answer _____

4)  
1:30 10:25

Answer _____

5)  
12:00 7:55

Answer _____

6)  
2:55 8:50

Answer _____

Elapsed Time – Hours/Minutes – Word Problems**Questions**

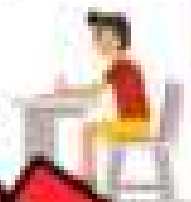
Read the problems and solve them below.

1. David played in a basketball game that started at 7:15pm. The game ended at 8:50pm. How long was the game?



2. Henry started studying at 3:10pm. He finished studying at 4:47pm. How long did he study for?

3. James started his test at 12:45pm. He has 25 minutes to finish the test. What time does he need to be done by?



4. Stephanie put her brownies in the oven at 4:07pm. They need 45 minutes. What time should she take them out?

5. Emma's flight took off at 2:20pm. It landed at 6:15pm. How long was the flight?



Work Shift Elapsed Time – Challenge Problems**Questions**

Read the problems and solve them below.

- Read the problem carefully Underline important information Draw pictures
- Use a timeline Solve the problem Check your answer

Pat works a 9-hour shift at the campground today. He starts work at 7:30am.

a)

Pat starts



b) Pat looks at his watch at 3:15pm. How long has he worked to work?

c) Yay, Pat is off work in 45 minutes! What time is it?

Task Cards: Elapsed Time**Objective**

What are we learning about?

To enhance students' ability to calculate exact elapsed times to the minute and reinforce their understanding of time management and clock reading skills.

Materials

What you will need for the activity

- 24 task cards
- Answer sheet for answers
- Pen or pencil

8-11h
16-18h**Instructions**

What you will do for the activity

1. Start by explaining the importance of time calculation in daily activities and how it relates to real-life situations.
2. Distribute a set of 24 task cards to each pair of students.
3. Provide each pair with a separate sheet of paper for their answers.
4. Instruct students to work in pairs to encourage collaboration and discussion, which can help them learn from each other's reasoning.
5. Explain that they are not required to work through the task cards in order. They can choose any card to start with and proceed at their own pace.
6. Students should write down just the letter of their answer (A, B, or C) on the answer sheet next to the corresponding task card number.
7. If you're using a timer, set a time limit to add a level of challenge and help manage the activity period. This could be the length of the class or a shorter interval, depending on your goals.
8. Once the time is up, or all pairs have completed as many cards as they can, go over the answers as a class. This review helps solidify learning and address any common mistakes or misunderstandings.
9. Encourage pairs to discuss strategies they used and any difficulties they encountered during the activity.

Task Cards

Cut out the task cards below

Card 17:

Start: 11:11 AM, End: 12:46 PM -
What is the duration of this
interval?

- A) 1 hour 25 minutes
- B) 1 hour 35 minutes
- C) 1 hour 45 minutes

Card 21:

Start: 7:42 AM, End: 9:17 AM - How
much time has elapsed?

- A) 1 hour 35 minutes
- B) 1 hour 25 minutes
- C) 1 hour 30 minutes

Start: 3:03 PM, End: 4:38 PM - How
long is the period?

- A) 1 hour 55 minutes
- B) 1 hour 45 minutes
- C) 1 hour 35 minutes

Card 22:

Start: 2:58 PM, End: 5:03 PM - How
much time has passed?

- A) 2 hours 5 minutes
- B) 2 hours 15 minutes
- C) 2 hours 10 minutes

Card 19:

Start: 10:30 AM, End: 12:05 PM -
What is the elapsed time?

- A) 1 hour 35 minutes
- B) 1 hour 25 minutes
- C) 1 hour 45 minutes

Start: 1:04 AM, End: 3:29 AM -
What is the elapsed time?

- A) 2 hours 25 minutes
- B) 2 hours 48 minutes
- C) 2 hours 55 minutes

Card 20:

Start: 4:40 PM, End: 7:15 PM - How
much time has passed?

- A) 2 hours 35 minutes
- B) 2 hours 25 minutes
- C) 2 hours 45 minutes

Card 24:

Start: 12:14 PM, End: 3:46 PM -
How long is the period?

- A) 3 hours 32 minutes
- B) 3 hours 22 minutes
- C) 3 hours 28 minutes

Task Cards: Elapsed Time**Answers**

Record your answers below.

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	

PREVIEW

Unit Quiz - Time

Part 1

Convert the units of measurement below

1) 2 hr

_____ min

5) 300 mins

_____ hr

9) 4 d

_____ hrs

2) 360 sec

_____ min

6) 48hrs

_____ d

10) 240 min

_____ hrs

3) 1 hr

7) 540 mins

_____ hr

11) 240 hrs

_____ d

4) 3 d

_____ d

12) 480 mins

_____ hrs

Part 2

How much time has gone by from the first clock to the second clock?

1)



4:35



9:35



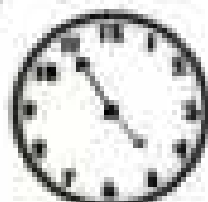
1:05

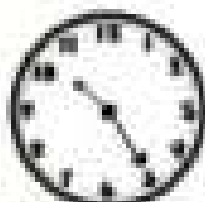


Part 3

What time is it? How much time has gone by from the first clock to the next?

1)





2)





Part 4

Follow the problem-solving steps below

- | | | |
|---|--|--|
| <input type="checkbox"/> Read the problem carefully | <input type="checkbox"/> Underline important information | <input type="checkbox"/> Draw pictures |
| <input type="checkbox"/> Use a timeline | <input type="checkbox"/> Solve the problem | <input type="checkbox"/> Check your answer |

Devin played video games a lot today. He started playing at 7:35am when he woke up. He took a break at noon (12:00pm) for lunch.

- a) How long did Devin play video games this morning?



- b) Devin joined some of his friends at 3:15pm for more video games. They played together until 5:50pm. How long did he play video games with his friends?

- c) Devin ended up playing 9 hours of video games today. He started playing again after dinner at 7:10pm. What time did he finish playing?



Google Slides Lessons Preview





Alberta Math Curriculum Number Unit – Grade 4

3-Part Lesson Format

Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Quotes
- And More!



Place Value - How Many...

Number	100 Millions	10 Millions	1 Million	100,000	10,000
100					
10,000					
100,000					
1,000,000					
10,000,000					
100,000,000					

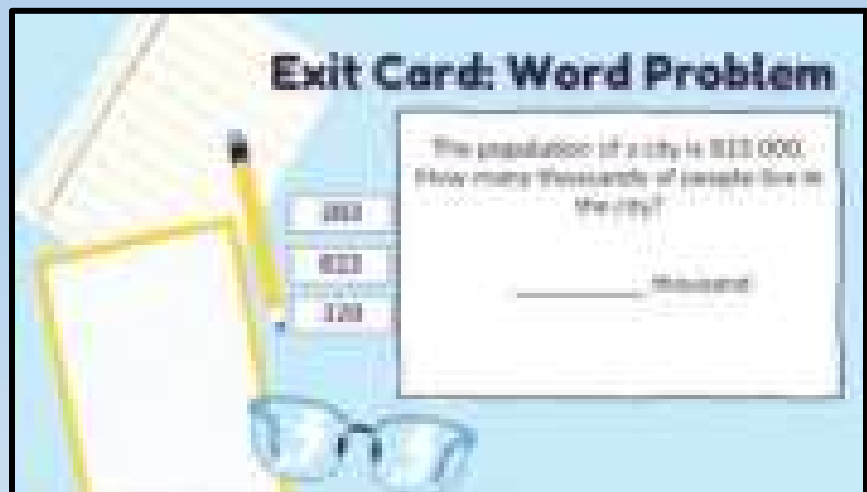
1 2 3 4 5 6 7 8 9 0

Part 2 – Action!

- Writing
- Matching
- Drag and Drop
- Drawing
- And More!

Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!





Alberta Math Curriculum Number Unit – Grade 4

Written Form

Draw A Line Matching The Standard Form To The Written Form

Written Form	Standard Form
One hundred eighty-nine thousand thirty-six	373 476
Two hundred ninety-seven thousand two hundred forty-nine	745 033
Seven hundred thirty-five thousand three hundred thirty-three	631 788
Three hundred Twenty-three thousand four hundred seventy-nine	562 667
Six hundred thirty-one thousand seven hundred sixty	189 036
Five hundred sixty-two thousand five hundred fifty-two	297 341

27 849

27 849

27 849

Compare

Drag the correct sign


1	632 876	<	632 876
2	456 789	>	456 789
3	812 345	<	812 345
4	999 999	>	999 999
5	100 000	>	1 000 000
6	321 234	<	321 234
7	789 012	<	789 012
8	567 890	>	567 890
9	999 999	>	999 999
10	111 111	<	111 111
11	222 222	<	222 222
12	333 333	<	333 333



Alberta Math Curriculum Number Unit – Grade 4

Comparing Decimals

Using the correct sign between the numbers

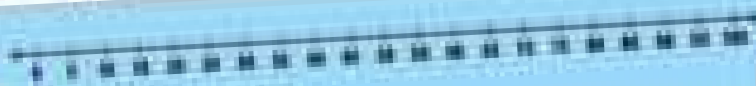


	Number 1	Sign	Number 2
1	0.25		0.5
2	1.40		1.70
3	4.70		5.71
4	7.40		8.00
5	24.70		24.71
6	43.00		43.01

	Number 1	Sign	Number 2
7	179.00		179.01
8	275.40		275.41
9	645.00		645.01
10	750.00		750.01
11	800.00		800.01
12	900.00		900.01

Rounding Numbers

Place the numbers on the number line. Then round the numbers by filling in the table.



	Rounded to Nearest 10	Rounded to Nearest 100	Rounded to Nearest 1000
10			
11			
12			

13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

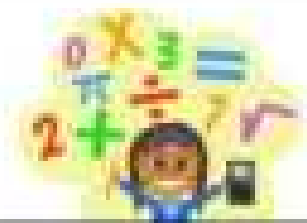


Workbook Preview





Grade 4
Strand: Number



	Curriculum Expectations	Pages
N.1	<p>Students apply place value to decimal numbers.</p> <ul style="list-style-type: none">• Identify the place value of each digit in a number, including tenths and hundredths.• Relate the values of adjacent places, including tenths and hundredths.• Determine the value of each digit in a number, including tenths and hundredths.• Express numbers, including decimal numbers, using words and numerals.• Express various compositions of a number, including decimal numbers, using place value.	7-69
<p>Preview of 150 pages from this product that contains 617 pages total.</p>		
N.2	<p>Students add and subtract within 10,000, including decimal numbers to hundredths.</p> <ul style="list-style-type: none">• Add and subtract numbers, including decimal numbers, using standard algorithms.• Assess the reasonableness of a sum or difference using estimation.• Solve problems using addition and subtraction, including problems involving money.	68-141
N.3	<p>Students explain properties of prime and composite numbers using multiplication and division.</p> <ul style="list-style-type: none">• Determine the factors of a number within 100.• Describe a number as prime or composite.• Determine the first five multiples of a given number within 100.• Recognize the greatest common factor (greatest common divisor) of two numbers within 100.	148-197



Grade 4
Strand Number

100

	Curriculum Expectations	Pages
NA	<p>Students multiply and divide natural numbers within 10,000.</p> <ul style="list-style-type: none"> Recall and apply multiplication number facts, with factors to 12, and related division number facts. Investigate patterns in multiplication and division of natural numbers by 10, 100, and 1000. Multiply and divide 3-digit natural numbers by 1-digit natural numbers using personal strategies. Examine standard algorithms for multiplication and division. Multiply and divide 3-digit natural numbers by 1-digit natural numbers using standard algorithms. Divide and express a quotient with or without a remainder. Investigate strategies for estimation of products and quotients. Assess the reasonableness of a product or quotient using estimation. Solve problems using multiplication and division. 	199-262
NS	<p>Students apply equivalence to the interpretation of fractions.</p> <ul style="list-style-type: none"> Model equivalent fractions by partitioning a whole in multiple ways. Determine fractions equivalent to a given fraction. Relate the position of equivalent fractions on the number line. Identify fractions in which the numerator and denominator have a common factor. Simplify a given fraction by dividing the numerator and denominator by a common factor. Express a fraction in simplest form. Compare and order fractions. Relate fractions and equivalent decimal numbers to their positions on the number line. Express fractions as decimal numbers and vice versa, limited to tenths and hundredths. 	266-301
NA	<p>Students interpret percentages.</p> <ul style="list-style-type: none"> Investigate percentage in familiar situations. Compare percentages within 100. Express the fraction, decimal, and percentage representations of the same part-whole relationship. 	303-315
TQ	Tests and quizzes	61-62, 142-144, 263-264, 316-318



100

N.1

Students apply place value to decimal numbers



100

Name: _____

7

Maths (Place Value)

Place Value Chart

258 341					
Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
2	5	8	3	4	1

Part 1

Fill in the place value charts below

1) 347 284

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones

2) 684 139

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones

3)

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones

4) 405 729

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones

Part 2

Which place value is the underlined number?

1) 724 <u>8</u> 32 Tens	2) 727 <u>5</u> 34	3) 32 <u>6</u> 291
4) 832 <u>4</u> 67	5) 232 <u>8</u> 52	6) 935 28 <u>4</u>
7) 292 <u>4</u> 23	8) 173 <u>3</u> 44	9) 903 03 <u>2</u>

Name: _____

8

Language (optional)
11

Place Value – How Many ...

Number	# of Thousands	# of Hundreds	# of Tens	# of Ones
32 457	32	4	5	7

Part 1

Fill in the table below

#	Number	# of Thousands	# of Hundreds	# of Tens	# of Ones
1.					
2.					
3.	87 123				
4.	351 478				
5.	428 927				
6.	274 349				
7.	681 872				
8.	382 978				
9.	973 648				
10.	846 239				

PREVIEW

Part 2

Fill in the blanks with the missing number

- 1) $242\,323 = 200\,000 + 40\,000 + \underline{\hspace{2cm}} + 300 + 20 + 3$
- 2) $843\,781 = 800\,000 + \underline{\hspace{2cm}} + 3\,000 + 700 + 80 + 1$
- 3) $729\,458 = \underline{\hspace{2cm}} + 20\,000 + 9\,000 + 400 + 50 + 8$
- 4) $417\,383 = 400\,000 + 10\,000 + 7\,000 + 300 + \underline{\hspace{2cm}} + 3$
- 5) $306\,739 = 300\,000 + 0 + 6\,000 + \underline{\hspace{2cm}} + 30 + 9$

Name: _____

10

Maths / Revision
11

Expanded Form

328 372 • _____ Standard Form
300 000 + 20 000 + 8 000 + 300 + 70 + 2 • _____ Expanded Form

Part 1

What is the standard form of the numbers below?

1) $500000 + 10000 + 1000 + 400 + 80 + 3$

2) $200000 + 10000 + 2000 + 600 + 50 + 2$

3) $200000 + 10000 + 50 + 70 + 5$

4) $400000 + 10000 + 4000 + 800 + 50 + 7$

5) $300000 + 50000 + 1000 + 70 + 2$

6) $900000 + 20000 + 4000 + 600 + 70 + 5$

Part 2

What is the expanded form of the numbers below?

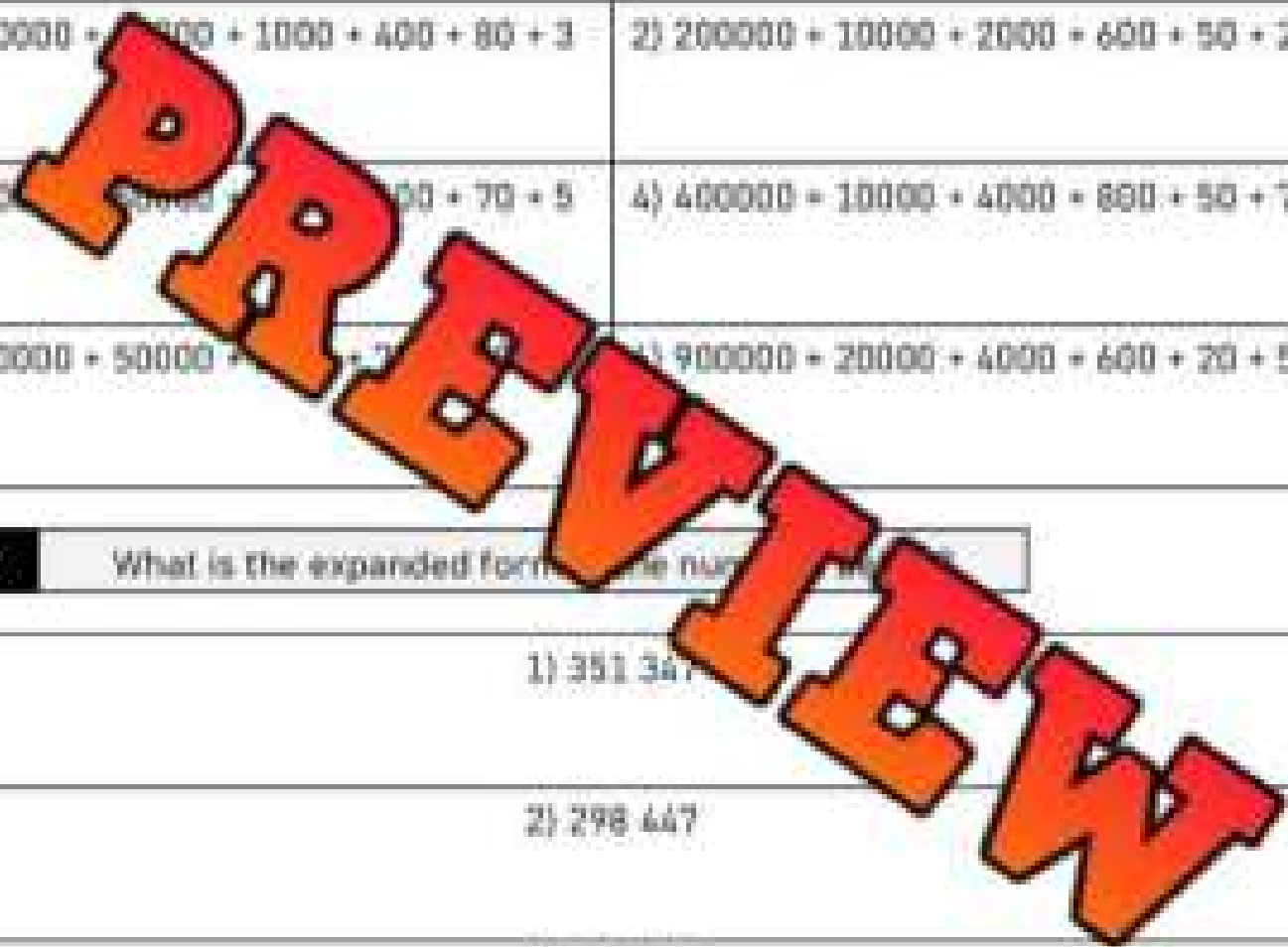
1) 351 347

2) 298 447

3) 978 482

4) 758 318

5) 647 207



Written Form

1 - One	5 - Five	9 - Nine	13 - Thirteen	17 - Seventeen	20 - Twenty	70 - Seventy
2 - Two	6 - Six	10 - Ten	14 - Fourteen	18 - Eighteen	40 - Forty	80 - Eighty
3 - Three	7 - Seven	11 - Eleven	15 - Fifteen	19 - Nineteen	50 - Fifty	90 - Ninety
4 - Four	8 - Eight	12 - Twelve	16 - Sixteen	25 - Twenty	60 - Sixty	100 - Hundred
						1000 - Thousand

Part 1

Write the standard form of the written words below

1) Six hundred and one thousand, two hundred

2) Nine hundred sixty-eight thousand, three hundred fifteen.

3) Seven hundred and two thousand, six hundred and seven

4) Eight hundred thirty-seven thousand, five hundred thirty-nine.

5) Four hundred eighty thousand and one hundred ninety-nine.

6) One hundred seventeen thousand, one hundred and sixty-four.

Part 2

Write the written form of the numbers

1) 135 142

2) 467 999

3) 633 237

4) 294 375

5) 253 032

PREVIEW

Task Cards: Place Value

Objective

What are we learning about?

Students will practice converting written numbers into their standard form to understand place value and number representation better.

Materials

What you will need for the activity:

- 24 task cards
- Separate answer recording sheet for answers
- Pencil

1 2 3 4 5
6 7 8 9 0

Instructions

What you will do during the activity:

1. Begin by explaining the concept of place value and the importance of understanding how numbers are constructed in our base-ten system.
2. Organize the students into pairs and distribute each pair with their sets of task cards.
3. Give each pair an answer recording sheet to record their own findings.
4. Encourage teamwork by having students collaborate and help each other in finding solutions.
5. Allow students to select any task card to begin with, emphasizing that they can complete the cards in any order they prefer.
6. Instruct students to record the letter of their chosen answer (A, B, or C) on their answer sheet beside the task card's number.
7. Consider using a timer to create a dynamic challenge, adjusting the duration to fit the lesson's objectives and complexity.
8. After the activity, review the answers collectively, discussing any challenging patterns and strategies used to solve them.
9. Have students reflect on the activity, sharing the methods they applied and obstacles they overcame.

Task Cards

Cut out the task cards below

Card 1:

Six hundred forty-one thousand, two hundred fifty-nine

- a) 614,259
b) 641,295
c) 641,259

Card 5:

What is the expanded form of the number below?

591,349

- a) $500,000 + 90,000 + 10,000 + 300 + 40 + 9$
b) $500,000 + 90,000 + 1,000 + 300 + 40 + 9$
c) $500,000 + 90,000 + 1,000 + 3,000 + 40 + 9$

Card 6:

Two hundred nine thousand, three hundred forty-five

- a) $90,000 + 8,000 + 345$
b) $90,000 + 8,000 + 700 + 345$
c) $90,000 + 8,000 + 700 + 345$

- a) 209,345
b) 290,453
c) 209,354

Card 3:

432,730

- a) $400,000 + 30,000 + 2,000 + 700 + 30$
b) $400,000 + 30,000 + 20,000 + 700 + 30$
c) $400,000 + 30,000 + 2,000 + 700 + 300$

Seven hundred and two thousand, seven hundred and twenty

- a) 772,720
b) 772,720
c) 772,652

Card 4:

 $700,000 + 60,000 + 1,000 + 200 + 40 + 1$

- a) 761,241
b) 760,241
c) 761,201

Card 8:

Fifty-eight thousand, ninety

- a) 58,009
b) 58,900
c) 58,090

PREVIEW

Task Cards

Cut out the task cards below

Card 9:

What is the expanded form of the number below? 324,510

- a) $300,000 + 20,000 + 4,000 + 500 + 10$
 b) $300,000 + 20,000 + 400 + 500 + 10$
 c) $300,000 + 2,000 + 400 + 500 + 10$

Card 13:

Five hundred twelve thousand, six hundred twenty-nine

- a) 521,629
 b) 512,629
 c) 512,269

Card 14:

Six hundred twenty-five thousand, four hundred eighty-two

- a) 625,428
 b) 625,482
 c) 652,482

Card 11:

375,291

- a) $300,000 + 70,000 + 5,000 + 200 + 90 + 1$
 b) $300,000 + 75,000 + 2,000 + 90 + 1$
 c) $300,000 + 70,000 + 5,000 + 200 + 9 + 1$

- a) $600,000 + 70,000 + 5,000 + 200 + 90 + 1$
 b) $600,000 + 70,000 + 5,000 + 200 + 9 + 1$
 c) $600,000 + 70,000 + 5,000 + 200 + 90 + 1$

Card 12:

My number has 6 hundred thousands, 7 ones, 2 more hundreds than ones, half as many ten thousands as hundred thousands, 2 tens, and 5 thousands.

What is my number?

- a) 635,321 b) 675,217 c) 635,927

Card 16:

$800,000 + 50,000 + 6,000 + 300 + 70 + 2$

- a) 856,307
 b) 865,372
 c) 856,372

PREVIEW

Task Cards

Cut out the task cards below

Card 17:

What is the expanded form of the number below?

745,210

- a) $700,000 + 40,000 + 5,000 + 200 + 10$
 b) $700,000 + 4,000 + 50,000 + 200 + 10$
 c) $700,000 + 4,000 + 5,000 + 2,000 + 10$

Card 21:

Four hundred fifteen thousand, six hundred thirty-four.

- a) 451,634
 b) 415,634
 c) 415,346

Eight hundred twenty-four thousand, five hundred

- a) 824,500
 b) 820,450
 c) 802,456

Card 22:

654,321

- a) $600,000 + 50,000 + 4,000 + 30 + 20 + 1$
 b) $600,000 + 50,000 + 4,000 + 300 + 20 + 1$
 c) $600,000 + 50,000 + 40,000 + 300 + 20 + 1$

Card 19:

Six hundred ninety thousand, eight hundred twenty-three.

- a) 690,823
 b) 690,283
 c) 609,823

- a) $500,000 + 60,000 + 700 + 2$
 b) $500,000 + 60,000 + 700 + 20$
 c) $500,000 + 60,000 + 700 + 20 + 2$

Card 20:

Forty-seven thousand, three hundred twelve.

- a) 47,132
 b) 47,312
 c) 47,231

Card 24:

My number has 2 hundred thousands, 4 ones, 3 more hundreds than ones, twice as many ten thousands as hundred thousands, 1 ten, and 6 thousands.

What is my number?

- a) 216,714 b) 246,714 c) 246,471

Name: _____

Task Cards: Place Value

Answers

Record your answers below

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	

PREVIEW

Place Value - Number Breakdown

Questions

Fill in the blanks below

Number Breakdown

548 782

H Th	Ten Th	Th	H	T	O

Write the value of the underlined digit

1) 548 782 = _____

2) 548 782 = _____

3) 548 782 = _____

4) 548 782 = _____

Fill in the blank in the expanded form below

_____ + _____ + _____ + _____ + _____ + _____

Fill in the pattern below

_____, _____, _____, _____, _____, _____

Fill in the pattern below

_____, _____, _____, _____, _____, _____

Fill in the pattern below

_____, _____, _____, _____, _____, _____

Compare using >, <, or =

548 782 548 795

515 315 548 782

548 782 523 346

588 325 548 782

508 237 548 782

548 782	+10	
548 782	+100	
548 782	+10 000	
548 782	- 1 000	
548 782	- 10 000	

Comparing Numbers

626 335



923 615

834 351



236 289

132 683



132 683

Part 1

Compare the following numbers

1) 663 189



4010

2) 263 447



311 350

3) 631 203



631 294

4) 135 437



100 000

5) 77 312



742 753

6) 362 149



365 000

7) 532 842



532 510

8) 532 510



550 393

9) 544 879



544 879

10) 235 441



237 391

11) 923 383



923 383

12) 274 371



274 371

Part 2

Write - Greater than, Equal to, Less than

1)

173 365 is _____ 141 537

Greater than

2)

162 116 is _____

3)

438 408 is _____ 453 293

4)

754 361 is _____ 754 361

5)

874 335 is _____ 874 432

6)

435 114 is _____ 445 115

Place Value Using Decimals

Decimal numbers are any numbers that represent a value less than one. We use a decimal point to represent that a number can be less than one. We would represent a single cookie with the number 1. We can still represent half a cookie by writing 0.5. The 0 is the whole number, while the numbers to the right of the decimal show how large the part of the whole is.

PLACE VALUE

3	3	6	.	5	8
Thousands	Tens	Ones	Decimal	Tenths	Hundredths

Part 1

Write down the place value for the underlined number?

1) <u>5</u> 200.32	3) 3 <u>5</u> 42.47	4) 2 314.6 <u>8</u>
5) 4 326.4 <u>3</u>	6) 8 264.7 <u>3</u>	8) 7 256.47
9) 3 102.5 <u>2</u>	10) 6 113.7 <u>1</u>	11) 3 374.4 <u>4</u>

Part 2

Fill in the place value table for the numbers below

1) 7 862.55

Thousands	Hundreds	Tens	Ones	Decimal	Tenths	Hundredths

2) 2 383.39

Thousands	Hundreds	Tens	Ones	Decimal	Tenths	Hundredths

Comparing Decimals

Part 1

Compare the following numbers

1) $0.5 > 0.2$

2) $0.3 < 0.4$

3) $0.8 < 0.6$

4) $1.0 < 1.9$

5) $1.3 < 0.8$

6) $0.8 < 0.5$

7) $1.9 < 20.1$

8) $30.3 < 25.9$

10) $47.12 < 33.53$

12) $77.99 < 77.92$

13) $132.22 < 132.65$

14) $155.36 < 454.71$

Part 2

Compare the following numbers

- 1) Steve and Kim both ran in the 100 metre race last week. Steve ran in 12.5 seconds and Kim ran it in 12.1 seconds. Who ran it faster?
- 2) LeBron James scores 28.4 points a game while James Harden scores 28.6 points a game. Who scores more points a game?
- 3) Dani and George's parents bought them a cake to share. Dani said she'll take 0.6 of the cake. Should George take the deal?

Ordering Decimals

0.2, 0.1, 0.5, 0.4, 0.9

Least to Greatest

0.1, 0.2, 0.4, 0.5, 0.9

15.2, 10.3, 7.9, 18.5

Greatest to Least

18.5, 15.2, 10.3, 7.9

Part 1

Order the numbers below from least to greatest

0.9, 0.5, 0.2

0.8, 0.9, 0.2, 0.4

0.6

1.34, 2.29, 1.55, 2.42

10.43, 10.93, 21.45, 22.87

24.53, 24.34, 18.48, 42

Part 2

Order the numbers below from greatest

0.2, 0.6, 0.3, 0.1

0.5, 0.3

13, 19, 15, 11

214, 292, 135, 142

13.54, 12.49, 10.45, 15.33

20.26, 17.63, 19.45, 18.61

PREVIEW

Activity: Decimal Treasure Hunt

Objective

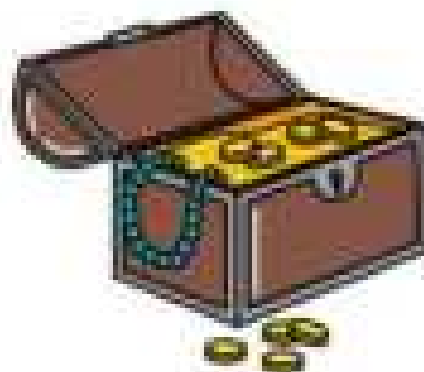
What are we learning about?

Students will practise ordering decimal numbers in the hundredths place from least to greatest in a fun and interactive way.

Materials

What you will need for the activity

- 12 index cards
- 12 pieces of paper
- Masking tape
- Tape
- Timer (optional)
- Small prizes (optional)



Instructions

How you will do it

1. Write a set of decimal numbers on 12 index cards. Each card should have one decimal number (or use the cards we have prepared).
2. Tape the cards in various locations around the room so the numbers are visible but not too easy to find.
3. Explain to the students that they will be going on a treasure hunt for the decimal number cards. They should not move the cards when they find them. Instead, they should write the numbers on the top part of their page.
4. Once all the cards are found and recorded, students must write the numbers in order from least to greatest on the bottom part of their page.
5. Allow students to move around the room individually to find the numbers.
6. Set a timer to add excitement and challenge (optional).
7. After the hunt, gather the students and discuss the correct order of the decimal numbers. Award small prizes to students who correctly ordered their numbers (optional).

Index Cards

Cut out the index cards below

1.5

1.23

PREVIEW

22.7

2.45

43.67

47.3

Index Cards

Cut out the index cards below

43.12

47.34

119.01

119.45

332.34

332.30

PREVIEW

Writing Decimal Numbers Using Words

When writing a decimal number, substitute the decimal for the word 'and'

Examples

14.3	fourteen and three tenths
3.53	three and fifty-three hundredths

Part 1

Match the number with the correct words.

	Seven and eight tenths	A	8.5
	Five-hundred-fifty and ninety hundredths	B	9.3
	Two-hundred-fifty and six tenths	C	18.7
	Eight and six tenths	D	74.8
	Two-thousand-fifty and six hundredths	E	125.6
	Nine and three tenths	F	542.95
	Eighteen and seven tenths	G	2085.41
	Five-hundred-forty-two and ninety-five hundredths	H	80 150.90

Part 2

Write the written form of the numbers.

1)	1.5	
2)	12.8	
3)	25.36	
4)	105.9	
5)	250.84	

Name: _____

Expanded Form



238.17

Standard Form

$200 + 30 + 8 + 0.1 + 0.07$

Expanded Form



Part 1

What is the expanded form of the numbers below?

1)		
2)	9	
3)	391.5	
4)	408.48	
5)	3 157.87	
6)	58 190.08	

Part 2

What is the standard form of the numbers below?

1)	$80 + 6 + 0.3$	
2)	$200 + 90 + 4 + 0.7$	
3)	$400 + 8 + 0.2 + 0.06$	
4)	$800 + 70 + 0.5 + 0.04$	
5)	$3000 + 700 + 60 + 0.7 + 0.01$	
6)	$50\,000 + 3000 + 800 + 20 + 3 + 0.9 + 0.01$	

PREVIEW

Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class

Name: _____

1) What is the expanded form of the number below?

235.8

2) What is the standard form of the number below?

$10\ 000 + 800 + 50 + 6 + 0.6 + 0.03$

Name: _____

1) What is the expanded form of the number below?

235.8

2) What is the standard form of the number below?

$10\ 000 + 800 + 50 + 6 + 0.6 + 0.03$

Name: _____

1) What is the expanded form of the number below?

235.8

2) What is the standard form of the number below?

$10\ 000 + 800 + 50 + 6 + 0.6 + 0.03$

Name: _____

1) What is the expanded form of the number below?

235.8

2) What is the standard form of the number below?

$10\ 000 + 800 + 50 + 6 + 0.6 + 0.03$

PREVIEW

Rounding Numbers to the Nearest 10 and 100

Round Down

Round Up

0	1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---	---

Rounding to the nearest 10

42 → 40

155 → 160

Rounding to the nearest 100

242 → 200

389 → 400

Part 1 Round the numbers to the nearest 10

1) 42 → _____	3) 31 → _____
4) 85 → _____	6) 74 → _____
7) 257 → _____	8) 147 → _____
10) 873 → _____	11) 923 → _____

Part 2 Round the numbers to the nearest 100

1) 272 → _____	2) 145 → _____	3) 307 → _____
4) 257 → _____	5) 363 → _____	6) 737 → _____
7) 901 → _____	8) 862 → _____	9) 751 → _____
10) 350 → _____	11) 402 → _____	12) 953 → _____

Rounding Numbers to the Nearest 1000

Round Down

Round Up

0	1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---	---

Rounding to the nearest 1 000

↓ 4 212 → 4 000

↑ 1 575 → 2 000

Part 1

Round the numbers to the nearest 1000

1) 3 107 → _____	2) 4 113 → _____	3) 4 478 → _____
4) 7 251 → _____	5) 4 561 → _____	6) 5 555 → _____
7) 2 457 → _____	8) 1 000 → _____	9) 2 518 → _____
10) 6 613 → _____	11) 2 361 → _____	12) 7 777 → _____
13) 1 162 → _____	14) 9 591 → _____	15) 3 333 → _____
16) 6 423 → _____	17) 8 671 → _____	18) 2 535 → _____

Part 2

Solve the word problems below

1) Michael Jordan scored 32 292 points during his career. Round his points to the nearest thousand.

2) The school raised \$6 672 in donations last year. Round the money to the nearest thousand.

Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class

Name: _____

Round the numbers to the nearest 1000.

- 1) 4376 → _____
- 2) 9093 → _____
- 3) 3725 → _____
- 4) 7976 → _____
- 5) 1842 → _____

Name: _____

Round the numbers to the nearest 1000.

- 1) 4376 → _____
- 2) 9093 → _____
- 3) 3725 → _____
- 4) 7976 → _____
- 5) 1842 → _____

Name: _____

Round the numbers to the nearest 1000.

- 1) 4376 → _____
- 2) 9093 → _____
- 3) 3725 → _____
- 4) 7976 → _____
- 5) 1842 → _____

Name: _____

Round the numbers to the nearest 1000.

- 1) 4376 → _____
- 2) 9093 → _____
- 3) 3725 → _____
- 4) 7976 → _____
- 5) 1842 → _____

PREVIEW

Rounding Numbers 3 Different Ways

Round Down

Round Up

0	1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---	---

Ten $1\ 864 \rightarrow 1\ 860$	Hundred $1\ 864 \rightarrow 1\ 900$	Thousand $1\ 864 \rightarrow 2\ 000$
------------------------------------	--	---

Questions Round the numbers three different ways

#	Ten	Hundred	Thousand
1	$2\ 137 \rightarrow$ _____	$2\ 137 \rightarrow$ _____	$2\ 137 \rightarrow$ _____
2	$6\ 136 \rightarrow$ _____	$6\ 136 \rightarrow$ _____	$6\ 136 \rightarrow$ _____
3	$2\ 041 \rightarrow$ _____	$2\ 041 \rightarrow$ _____	$2\ 041 \rightarrow$ _____
4	$8\ 355 \rightarrow$ _____	$8\ 355 \rightarrow$ _____	$8\ 355 \rightarrow$ _____
5	$6\ 279 \rightarrow$ _____	$6\ 279 \rightarrow$ _____	$6\ 279 \rightarrow$ _____
6	$1\ 059 \rightarrow$ _____	$1\ 059 \rightarrow$ _____	$1\ 059 \rightarrow$ _____
7	$7\ 502 \rightarrow$ _____	$7\ 502 \rightarrow$ _____	$7\ 502 \rightarrow$ _____
8	$9\ 921 \rightarrow$ _____	$9\ 921 \rightarrow$ _____	$9\ 921 \rightarrow$ _____

Word Problems: Rounding Numbers

Questions

Round the numbers below appropriately.

	Word Problems for Rounding	Answers
1	Lily counted 157 birds in the park. About how many birds did she see?	
2	The school camp, 2 456 children were present on the first day. About how many children were at the camp?	
3	A library has 289 books in its collection. Roughly how many books are in the library?	
4	A marathon runner ran 4237 meters in a race. About how many meters did the runner complete?	
5	There were 492 people at a concert. About how many people attended the concert?	
6	In a survey, 1 987 people said they prefer reading books over e-books. Roughly how many people prefer books?	
7	A tree was measured to be 523 inches tall. About how tall is the tree?	

PREVIEW

Rounding Decimal Numbers

 Round Down \longleftarrow
 \longrightarrow Round Up

0	1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---	---

Rounding to the nearest whole number

$$0.7 \rightarrow 1$$

$$24.3 \rightarrow 24$$

Part 1 Round the following numbers up to 1 or down to 0

1) 0.6 \rightarrow _____	2) 0.9 \rightarrow _____	3) 0.7 \rightarrow _____
4) 0.1 \rightarrow _____	5) 0.8 \rightarrow _____	6) 0.3 \rightarrow _____
7) 0.2 \rightarrow _____	8) 0.5 \rightarrow _____	9) 0.5 \rightarrow _____

Part 2 Round the following numbers to the nearest whole number

1) 5.6 \rightarrow _____	2) 4.2 \rightarrow _____	3) 3.1 \rightarrow _____
4) 8.2 \rightarrow _____	5) 2.4 \rightarrow _____	6) 5.5 \rightarrow _____
7) 12.1 \rightarrow _____	8) 10.7 \rightarrow _____	9) 14.9 \rightarrow _____
10) 22.2 \rightarrow _____	11) 29.6 \rightarrow _____	12) 27.3 \rightarrow _____
13) 47.5 \rightarrow _____	14) 53.8 \rightarrow _____	15) 71.2 \rightarrow _____

Rounding Decimal Numbers to the Nearest Tenth

Round Down

Round Up

0	1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---	---

Rounding to the nearest tenth

$$0.73 \rightarrow 0.7$$

$$24.45 \rightarrow 24.5$$

Part 1 Round the following decimal numbers to the nearest tenth

1) $0.65 \rightarrow$ _____	3) $0.27 \rightarrow$ _____
4) $0.16 \rightarrow$ _____	6) $0.33 \rightarrow$ _____
7) $0.52 \rightarrow$ _____	9) $0.75 \rightarrow$ _____

Part 2 Round the following decimal numbers to the nearest tenth

1) $5.62 \rightarrow$ _____	2) $3.12 \rightarrow$ _____	3) $1.45 \rightarrow$ _____
4) $3.22 \rightarrow$ _____	5) $4.44 \rightarrow$ _____	6) $8.54 \rightarrow$ _____
7) $15.31 \rightarrow$ _____	8) $13.76 \rightarrow$ _____	9) $16.97 \rightarrow$ _____
10) $27.42 \rightarrow$ _____	11) $31.56 \rightarrow$ _____	12) $22.31 \rightarrow$ _____
13) $44.45 \rightarrow$ _____	14) $55.89 \rightarrow$ _____	15) $74.24 \rightarrow$ _____

French and English Decimal Notation

	Rule	Example
English	A period is used as the decimal point	5.75
French	A comma is used as the decimal point	5,75

Part 1 Is the number written in French or English decimal notation?

1)	8.	English	French	4)	15000.18	English	French
2)	8,15	English	French	5)	1.800.05	English	French
3)	8,15	English	French	6)	81.65\$	English	French

Part 2 Write the number in English and French

	Words	English	French
1)	Seven and three tenths		
2)	Twelve and eighteen hundredths		
3)	Twenty and seven tenths		
4)	Six-hundred five and thirty-six hundredths		
5)	Ninety thousand five and three tenths		
6)	Fourteen thousand two hundred and sixty-one hundredths		

Part 3 Write the decimals below in words

1)	8.2	
2)	28.15	
3)	138.66	

Converting Cents to Dollars

Money can be written as cents or dollars. When we have less than 1 dollar, we use cents. When we have more than 1 dollar, we use dollars. If we have whole dollars and cents, we can combine the two.

Examples - $100\text{¢} = \$1.00$

$50\text{¢} = \$0.50$

$142\text{¢} = \$1.42$

Part 1 Convert the cents into dollars

¢	\$
100¢	\$1.00
200¢	
300¢	
400¢	
500¢	\$5.00
600¢	
700¢	
800¢	
900¢	\$9.00
1000¢	

¢	\$
150¢	\$1.50
250¢	
325¢	
450¢	
525¢	
675¢	
720¢	\$7.20
999¢	


Part 2 Circle the greatest amount of money

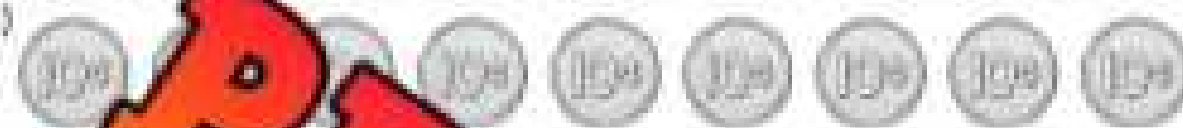
1)	100¢	\$1.00	350¢	\$2.30
2)	200¢	\$3.00	750¢	\$3.50
3)	300¢	\$2.00	220¢	\$1.60
4)	400¢	\$4.00	575¢	\$5.25
5)	500¢	\$7.00	250¢	\$6.40


Skip Counting Decimals Using Cents

Questions


Count the money and write down the total in dollars - decimals


1)  \$

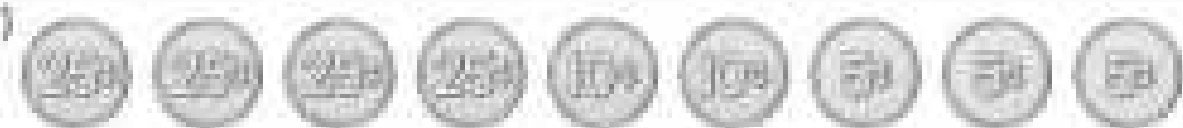
2)  \$

3)  \$

4)  \$

5)  \$

6)  \$

7)  \$



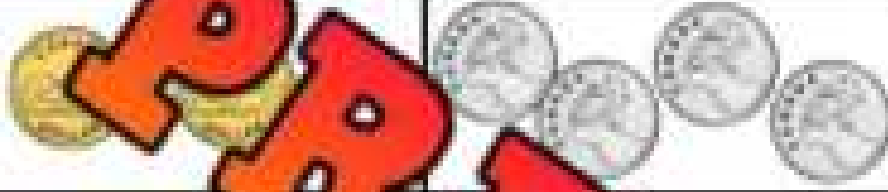
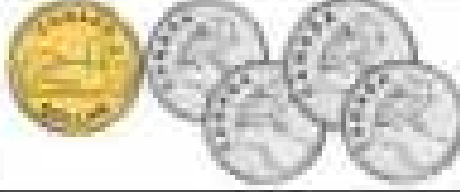
Counting Canadian Coins

 = 100¢ or \$1.00	 = 10¢ or \$0.10	
 = 200¢ or \$2.00	 = 25¢ or \$0.25	5¢ or \$0.05


25¢ or \$0.25

Questions

Count the coins below:

	
1) _____ ¢ or \$ _____	3) _____ ¢ or \$ _____

	
4) _____ ¢ or \$ _____	5) _____ ¢ or \$ _____

		
7) _____ ¢ or \$ _____	8) _____ ¢ or \$ _____	9) _____ ¢ or \$ _____

		
10) _____ ¢ or \$ _____	11) _____ ¢ or \$ _____	12) _____ ¢ or \$ _____


PREVIEW

Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

Count the coins below



1) _____ € or \$ _____

Name: _____

Count the coins below



_____ € or \$ _____

Name: _____

Count the coins below



1) _____ € or \$ _____

Name: _____

Count the coins below



1) _____ € or \$ _____

PREVIEW

Name: _____

61

Grade 5 Math

Place Value Quiz

Part 1

Which place value is the underlined number?

1) 814 832

2) 307 734

3) 532 405

4) 351 852

5) 262 5

6) 393 014

Part 2

What is the exponent of the numbers below?

1) _____
2) 465 0

3) 892 102

Part 3

Write the standard form of the written words below

1) Five hundred thirty-three thousand, two hundred forty-one

2) Six hundred twenty-eight thousand, four hundred twelve

3) Nine hundred eleven thousand, three hundred sixty-six

PREVIEW

Part 4

Fill in the place value table for the numbers below

1) 7 862.55

Thousands	Hundreds	Tens	Ones	Decimal	Tenths	Hundredth

2) 2 383.39

Thousands	Hundreds	Tens	Ones	Decimal	Tenths	Hundredth

Part 5

What value is the underlined number?

1) 5 115.442) 6 602.473) 3 148.52

50

5) 8 103.416) 7 147

Part 6

Order the numbers below from least to greatest

0.5, 0.9, 0.3, 0.2

0.7, 0.9, 0.3, 0.4

0.24, 0.26, 0.23, 0.21

0.75, 0.73, 0.17, 0.97

Part 7

Round the numbers three different ways.

#	Ten	Hundred	Thousand
1)	8216 → _____	8216 → _____	8216 → _____
2)	3151 → _____	3151 → _____	3151 → _____
3)	6795 → _____	6795 → _____	6795 → _____

Part 8

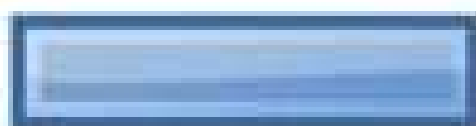
Round the decimal number to the nearest tenth.

1) 0.78 → _____	2) 0.42 → _____
3) 0.36 → _____	4) 0.59 → _____
5) 0.51 → _____	6) 0.84 → _____

Part 9

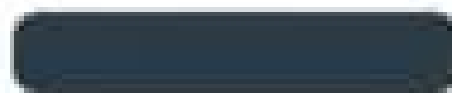
Count the coins below.

		
1) _____ € or \$ _____	2) _____ € or \$ _____	3) _____ € or \$ _____
		
4) _____ € or \$ _____	5) _____ € or \$ _____	6) _____ € or \$ _____



N.2

Students add and subtract
within 10 000, including
decimal numbers to
hundredths.



Mental Math Strategy – Counting On

Directions:

1. Circle the higher number on the hundred's chart/number line.
2. Count up by the other number and write down the answer.

$13 + 5 =$

 HUNDREDS CHART

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

$17 + 4 =$

 HUNDREDS CHART

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

$23 + 7 =$

 HUNDREDS CHART

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

$34 + 7 =$

 HUNDREDS CHART

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

$10 + 3 =$

 HUNDREDS CHART

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

$83 + 8 =$

 HUNDREDS CHART

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

$7 + 9 =$ _____



$11 + 6 =$ _____



$7 + 13 =$ _____



PREVIEW

Mental Math Strategy – Making Doubles

Directions

1. Decide which number you will double and add those numbers together.
2. Subtract or add the remaining amount.

*** If you added to the original number, subtract at the end. If you subtracted from the original number, then add at the end.

$$25 + 25 = 50$$
$$50 + 1 = 51$$

$$46 + 45 = 91$$
$$91 - 1 = 90$$

$$50 + 51 = 101$$

$$76 + 75 = 151$$

$$75 + 75 = 150$$

$$99 + 101 = 200$$

$$149 + 152 = 301$$

$$123 + 123 = 246$$

$$100 + 100 = 200$$

$$248 + 253 = 501$$

$$499 + 502 = 1001$$

$$749 + 748 = 1497$$

PREVIEW

Mental Math – Break Into Place Value

Directions

1. Solve each digit by writing out its place value and adding it to the other number's same place value (hundreds + hundreds, tens + tens, ones + ones)
2. Add together your totals

$135 + 219$

$100 + 200 = 300$

$30 + 10 = 40$

$5 + 9 = 14$

$40 + 14 = 54$

$300 + 54 = 354$

$124 + 56$

$146 + 123$

$214 + 188$

$168 + 254$

$167 + 173$

$355 + 242$

PREVIEW

Mental Math – Adding in Chunks

Directions:

1. Keep the bigger number the same
2. Add "chunks" of the smaller number to the bigger number.
3. The chunks need to add up to the smaller number

$$\begin{array}{r} 124 + 125 \\ + 100 = 224 \\ + 20 = 244 \\ + 1 = 245 \end{array}$$

$134 + 145$

$243 + 254$

$264 + 228$

$334 + 358$

$357 + 553$

$664 + 287$

PREVIEW

Adding – No Regrouping**Questions**

Use the standard algorithm to solve the addition problems below

1) $\begin{array}{r} 52 \\ + 11 \\ \hline \end{array}$	2) $\begin{array}{r} 23 \\ + 14 \\ \hline \end{array}$	3) $\begin{array}{r} 42 \\ + 17 \\ \hline \end{array}$	4) $\begin{array}{r} 12 \\ + 33 \\ \hline \end{array}$	5) $\begin{array}{r} 55 \\ + 40 \\ \hline \end{array}$
6) $\begin{array}{r} 241 \\ + 241 \\ \hline \end{array}$	7) $\begin{array}{r} 736 \\ + 243 \\ \hline \end{array}$	8) $\begin{array}{r} 736 \\ + 243 \\ \hline \end{array}$	9) $\begin{array}{r} 525 \\ + 212 \\ \hline \end{array}$	10) $\begin{array}{r} 332 \\ + 351 \\ \hline \end{array}$
11) $\begin{array}{r} 3\ 122 \\ + 1\ 615 \\ \hline \end{array}$	12) $\begin{array}{r} 5\ 136 \\ + 3\ 850 \\ \hline \end{array}$	13) $\begin{array}{r} 4\ 252 \\ + 2\ 317 \\ \hline \end{array}$	14) $\begin{array}{r} 4\ 614 \\ + 5\ 362 \\ \hline \end{array}$	

Word Problems

Answer the questions below.

1) Lily and her two friends went to the aquarium. Lily saw 123 colorful fish, her first friend saw 234 fish, and her second friend saw 341 fish. How many fish did they see in total?

2) During a charity run, three runners fundraised and were able to donate \$1207, \$2532, and \$5110, respectively. How much money will be donated in total by these three runners?

Addition Word Problems – No Regrouping

Questions

Solve the problems below

1) William walked 3 403 steps this morning before noon and 6 265 steps for the rest of the day. How many total steps did he walk today?



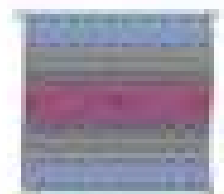
2) Spence has \$7 234 in his bank account. He won \$1 247 in a raffle. How much does he have now?



3) Rob loves to drink juice. Today he drank 1 234mL of orange juice and 3 358mL of apple juice. How much total juice did Rob drink?






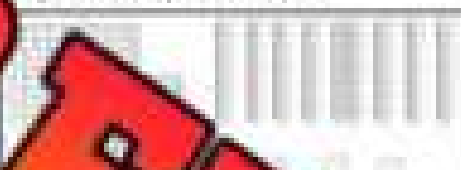

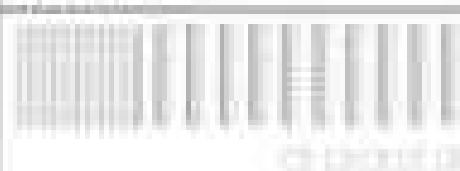

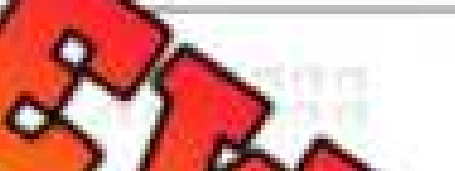
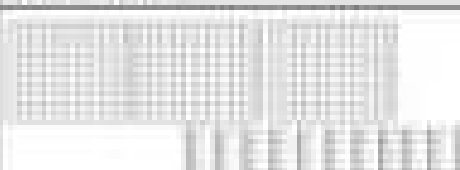


4) Sofia knitted a blanket with 4 452cm of blue yarn and 3 514cm of purple yarn. How many centimetres of total yarn did Sofia use to make the blanket?



Regrouping – Which is Equal?

Questions

Which is equal to the picture? There may be more than one answer!

 <p>10 columns of 10 ones</p> <p>a) 1 ten b) 1 ten, 2 ones c) 12 tens</p>	 <p>2 columns of 3 tens</p> <p>a) 2 tens, 3 ones b) 3 tens, 3 ones c) 2 tens, 13 ones</p>	 <p>2 columns of 10 tens</p> <p>a) 2 hundreds, 10 tens b) 3 hundreds c) 12 tens</p>
 <p>2 columns of 10 tens</p> <p>a) 20 ones b) 1 ten, 10 ones c) 20 tens</p>	 <p>3 columns of 10 tens</p> <p>a) 3 tens b) 2 hundreds, 1 ten c) 3 hundreds</p>	 <p>12 columns of 10 tens</p> <p>a) 12 tens b) 20 ones c) 120 tens</p>
 <p>2 columns of 10 tens</p> <p>a) 1 hundred, 11 tens b) 2 hundreds, 11 tens c) 30 tens</p>	 <p>10 columns of 10 tens</p> <p>a) 9 tens, 10 ones b) 1 hundred c) 10 tens</p>	 <p>14 columns of 10 tens</p> <p>a) 14 tens b) 1 ten, 4 ones c) 14 ones</p>
 <p>4 columns of 10 tens</p> <p>a) 41 tens b) 41 hundreds c) 4 hundreds, 1 ten</p>	 <p>10 columns of 10 tens</p> <p>a) 10 tens b) 1 hundred, 1 tens c) 11 tens</p>	 <p>2 columns of 10 tens</p> <p>a) 20 tens b) 1 hundred, 11 tens c) 210 ones</p>

PREVIEW

Adding – Regrouping

Questions

Use the standard algorithm to solve the addition problems below

1) $\begin{array}{r} 46 \\ + 14 \\ \hline \end{array}$	2) $\begin{array}{r} 29 \\ + 14 \\ \hline \end{array}$	3) $\begin{array}{r} 35 \\ + 12 \\ \hline \end{array}$	4) $\begin{array}{r} 17 \\ + 24 \\ \hline \end{array}$	5) $\begin{array}{r} 55 \\ + 35 \\ \hline \end{array}$
6) $\begin{array}{r} 216 \\ + 214 \\ \hline \end{array}$	8) $\begin{array}{r} 376 \\ + 253 \\ \hline \end{array}$	9) $\begin{array}{r} 485 \\ + 232 \\ \hline \end{array}$	10) $\begin{array}{r} 366 \\ + 361 \\ \hline \end{array}$	
11) $\begin{array}{r} 6\ 212 \\ + 7\ 315 \\ \hline \end{array}$	12) $\begin{array}{r} 5\ 224 \\ + 6\ 530 \\ \hline \end{array}$	13) $\begin{array}{r} 8\ 252 \\ + 9\ 37 \\ \hline \end{array}$	14) $\begin{array}{r} 8\ 252 \\ + 9\ 37 \\ \hline \end{array}$	15) $\begin{array}{r} 7\ 654 \\ + 8\ 362 \\ \hline \end{array}$

Word Problems

Answer the questions below.

1) Tim has been saving money to buy a bike. In January, he saved \$2,845. In February, he saved another \$1,566. How much money has Tim saved in total for the bike?

2) In Miss Garcia's class, the book club read 1,694 pages in the first month and 2,565 pages in the second month. How many pages did the book club read altogether?

Addition Word Problems – Regrouping

Questions

Solve the problems below

1) Isaac donated \$6 468 last year to charity. This year, he has donated \$2 729. How much has Isaac donated in the last two years?



2) A delivery truck drove 4 538km last week. This week, the driver has driven 3 871km. How far has the driver driven since last week?



3) Charlotte ate 2 793 calories yesterday. Today she participated in a basketball tournament, so she expended a lot of energy. So she ate 1 234 calories today. How many calories did Charlotte eat in the last two days?

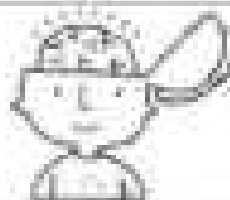


4) Ken ran 3 754m this morning according to his GPS. He ran 5 838m after school today. How many total metres did Ken run today?



Mental Math – Adding Decimals – Place Value**Directions:**

1. Add the decimals one at a time
2. Add the whole numbers
3. Add the answers together



$$\begin{array}{r} 55 + 37 \\ 88 + 27 = 115 \\ 5 + 3 = 8 \\ 115 + 8 = 123 \end{array}$$

$$\begin{array}{r} 23 + 14 \\ 54 + 27 \\ + 3 \end{array}$$

$23 + 41$

$5.8 + 6.2$

$12.4 + 6.5$

$13.4 + 4.2$

$27.3 + 6.7$

$24.25 + 11.63$

PREVIEW

Mental Math – Adding Decimals – Adding Chunks**Directions:**

1. Keep the bigger number the same
2. Add the other whole number to the bigger number
3. Add the decimal number to your answer



$$\begin{aligned} 55 + 17 \\ 55 + 3 = 58 \\ 58 + 07 = 65 \end{aligned}$$

$3.3 + 2.4$

$3.3 + 2 = 5.3$

$5.3 + 0.4 = 5.7$

$1.5 + 1.3$

4.5

$14.4 + 5.5$

$18.5 + 10.7$

$10.3 + 2$

$24.52 + 10.23$

$25.44 + 3.53$

PREVIEW

Adding Decimals – Hundredths – No Regrouping

Questions

Use the standard algorithm to solve the addition problems below.

1) $\begin{array}{r} 51.32 \\ + 12.25 \\ \hline \end{array}$	2) $\begin{array}{r} 25.63 \\ + 31.14 \\ \hline \end{array}$	3) $\begin{array}{r} 14.32 \\ + 21.67 \\ \hline \end{array}$	4) $\begin{array}{r} 41.22 \\ + 43.11 \\ \hline \end{array}$	5) $\begin{array}{r} 35.75 \\ + 54.20 \\ \hline \end{array}$
6) $\begin{array}{r} 34.11 \\ + 24.22 \\ \hline \end{array}$	7) $\begin{array}{r} 45.33 \\ + 32.44 \\ \hline \end{array}$	8) $\begin{array}{r} 72.52 \\ + 23.33 \\ \hline \end{array}$	9) $\begin{array}{r} 31.25 \\ + 21.12 \\ \hline \end{array}$	10) $\begin{array}{r} 23.62 \\ + 23.24 \\ \hline \end{array}$
11) $\begin{array}{r} 62.62 \\ + 22.33 \\ \hline \end{array}$	12) $\begin{array}{r} 44.29 \\ + 12.60 \\ \hline \end{array}$	13) $\begin{array}{r} 24.36 \\ + 14.25 \\ \hline \end{array}$	14) $\begin{array}{r} 34.54 \\ + 24.31 \\ \hline \end{array}$	15) $\begin{array}{r} 31.25 \\ + 11.53 \\ \hline \end{array}$

PREVIEW

Word Problems

Answer the questions below.

1) Sara made 12.75 litres of lemonade on Monday and 13.20 litres on Tuesday. How much lemonade did she make in total?

2) In his first race, Jake finished with a time of 37.56 seconds. His second race was even faster, at 31.33 seconds. What was his total time for both races?

Adding Decimals – Regrouping

Questions

Use the standard algorithm to solve the addition problems below

1) $\begin{array}{r} 73.72 \\ + 15.53 \\ \hline \end{array}$	2) $\begin{array}{r} 35.46 \\ + 43.73 \\ \hline \end{array}$	3) $\begin{array}{r} 34.94 \\ + 22.33 \\ \hline \end{array}$	4) $\begin{array}{r} 52.53 \\ + 14.52 \\ \hline \end{array}$	5) $\begin{array}{r} 24.57 \\ + 52.72 \\ \hline \end{array}$
6) $\begin{array}{r} 20.12 \\ + 17.34 \\ \hline \end{array}$	7) $\begin{array}{r} 45.23 \\ + 27.63 \\ \hline \end{array}$	8) $\begin{array}{r} 48.26 \\ + 27.63 \\ \hline \end{array}$	9) $\begin{array}{r} 56.57 \\ + 49.22 \\ \hline \end{array}$	10) $\begin{array}{r} 38.34 \\ + 58.52 \\ \hline \end{array}$
11) $\begin{array}{r} 292.67 \\ + 125.33 \\ \hline \end{array}$	12) $\begin{array}{r} 474.21 \\ + 353.52 \\ \hline \end{array}$	13) $\begin{array}{r} 142.52 \\ + 93.52 \\ \hline \end{array}$	14) $\begin{array}{r} 42.52 \\ + 71.32 \\ \hline \end{array}$	15) $\begin{array}{r} 742.41 \\ + 721.32 \\ \hline \end{array}$

Word Problems

Answer the questions below

1) A bag of apples weighs 325.85 grams, and a bag of oranges weighs 587.95 grams. What is the total weight of both bags together?

2) A classroom was being painted in sections. The first section took 312.38 millilitres of paint and the second section took 291.89 millilitres. How much paint was used in total?

Subtraction Mental Math – Counting Back

Directions:

1. Circle the higher number on the hundred's chart/number line.
2. Count back by the other number and write down the answer.



$18 - 5 =$

HUNDREDS CHART

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

$22 - 4 =$

HUNDREDS CHART

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

$27 - 7 =$

HUNDREDS CHART

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

$43 - 9 =$

HUNDREDS CHART

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

$93 - 6 =$

HUNDREDS CHART

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

$17 - 6 =$



$15 - 4 =$



$20 - 8 =$



PREVIEW

Subtraction Mental Math – Counting Up**Directions:**

1. Start with the smaller number
2. Count up from the smaller number to the bigger number to find the difference
3. The difference is the answer

$124 - 104$



Answer: 6 + 10 + 4 =

$254 - 239$

$243 -$

$254 - 240$

$377 - 354$

$783 - 713$

$852 - 822$

PREVIEW

Mental Math Strategy – Subtracting in Chunks

Directions

1. Keep the bigger number the same
2. Subtract "chunks" of the smaller number from the bigger number
3. The chunks need to add up to the smaller number



$$124 - 115$$

$$124 - 100 = 24$$

$$24 - 10 = 14$$

$$256 - 145$$

$$245$$

$$264 - 142$$

$$357 - 234$$

$$42 - 3$$

$$753 - 323$$

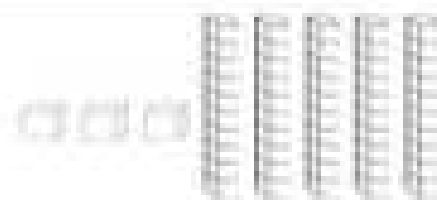
$$873 - 562$$

PREVIEW

Subtracting Using Base Ten Blocks

Questions

Subtract from the base ten blocks



$53 - 12 = \underline{\quad}$

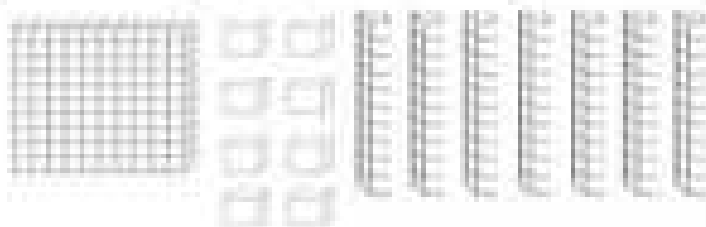


$35 - 15 = \underline{\quad}$

$46 - 12 = \underline{\quad}$

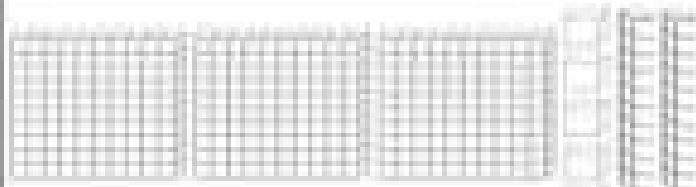
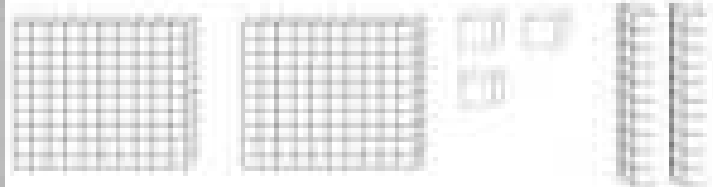


$63 - 11 = \underline{\quad}$



$178 - 110 = \underline{\quad}$

$134 - 120 = \underline{\quad}$



$223 - 101 = \underline{\quad}$

$328 - 215 = \underline{\quad}$

PREVIEW

Subtracting Money

Questions

Subtract from the money below



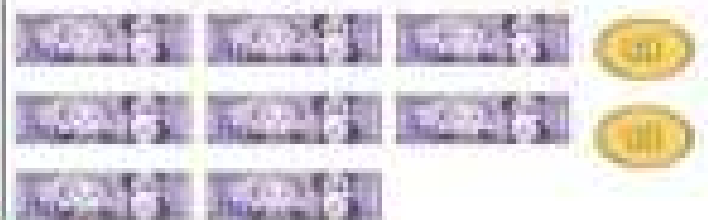
$$\$51 - \$21 = \underline{\hspace{2cm}}$$



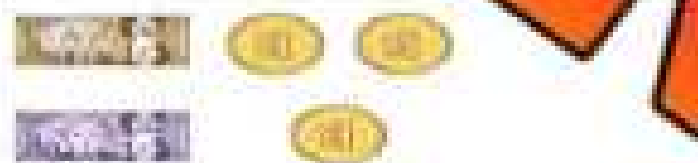
$$\$51 - \$11 = \underline{\hspace{2cm}}$$



$$\$61 - \$24 = \underline{\hspace{2cm}}$$



$$\$82 - \$51 = \underline{\hspace{2cm}}$$



$$\$113 - \$12 = \underline{\hspace{2cm}}$$



$$\$117 - \$34 = \underline{\hspace{2cm}}$$



$$\$223 - \$113 = \underline{\hspace{2cm}}$$



$$\$117 - \$304 = \underline{\hspace{2cm}}$$



$$\$413 - \$312 = \underline{\hspace{2cm}}$$



$$\$403 - \$400 = \underline{\hspace{2cm}}$$

PREVIEW

Estimation – Compatible Numbers

Compatible Numbers is an estimation strategy we use to make adding, subtracting, multiplying, and dividing easier. It involves changing the numbers to make them easier to work with.

Examples: 1) $78 - 47$ could be $80 - 50$

2) $382 - 112$ could be $400 - 100$

Questions

Use compatible numbers to make the subtraction questions easier.

	Original Question	Compatible Numbers
1		$\underline{\quad} - \underline{\quad} = \underline{\quad}$
2		$\underline{\quad} - \underline{\quad} = \underline{\quad}$
3	$312 - 197$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$
4	$456 - 247$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$
5	$604 - 364$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$
6	$857 - 448$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$
7	$704 - 554$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$
8	$911 - 896$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$
9	$1,256 - 1,151$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$
10	$2,889 - 2,509$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$

PREVIEW

Subtraction – Exact or Estimate?

When we need to subtract numbers, we sometimes need an exact answer. When we don't need an exact answer, we can estimate to make our subtracting easier.

Questions

Decide if you will find the exact answer or estimate

1) Lily has \$524 and goes shopping. She buys a new jacket for \$272. She needs to have \$250 left in her bank account so she can go on a trip tomorrow. Should she estimate or do the exact amount? Do the math below.



2) Michelle has made 515 cookies for her school. She needs 463 cookies for the 463 students at her school. How many more does she need to work with her. Does she have enough? Should she do the math or estimate? Do the math below.

3) The Nichol's family is going on a day trip to Toronto. They have about 4 hours before they have to go home. They want to visit the zoo for 4 hours, a restaurant for 55 minutes, and a mall for 115 minutes. Do they have enough time? Should they estimate or do the exact math? Do the math below.



Subtraction – No Borrowing**Questions**

Use the standard algorithm to solve the subtraction problems below.

1)
$$\begin{array}{r} 53 \\ - 12 \\ \hline \end{array}$$

2)
$$\begin{array}{r} 35 \\ - 14 \\ \hline \end{array}$$

3)
$$\begin{array}{r} 45 \\ - 23 \\ \hline \end{array}$$

4)
$$\begin{array}{r} 39 \\ - 15 \\ \hline \end{array}$$

5)
$$\begin{array}{r} 64 \\ - 40 \\ \hline \end{array}$$

6)
$$\begin{array}{r} 25 \\ - 23 \\ \hline \end{array}$$

8)
$$\begin{array}{r} 788 \\ - 224 \\ \hline \end{array}$$

9)
$$\begin{array}{r} 598 \\ - 223 \\ \hline \end{array}$$

10)
$$\begin{array}{r} 278 \\ - 121 \\ \hline \end{array}$$

11)
$$\begin{array}{r} 6\ 632 \\ - 6\ 422 \\ \hline \end{array}$$

12)
$$\begin{array}{r} 5\ 436 \\ - 3\ 320 \\ \hline \end{array}$$

13)
$$\begin{array}{r} 6\ 737 \\ - 2\ 454 \\ \hline \end{array}$$

15)
$$\begin{array}{r} 4\ 344 \\ - 3\ 231 \\ \hline \end{array}$$

Word Problems

Answer the questions below.

1) Jade had \$5,578 saved up for a new car. She spent \$2,456 on a down payment. How much money does Jade have left?

2) A farmer harvested 8,888 apples from his orchard. He sold 3,333 apples at the local market. How many apples does he have left?

Adding and Subtracting Word Problems

Questions

Solve the following questions using both addition and subtraction

1) Will and Ben collected valuable rocks last summer. Will collected 112 rocks and Ben collected 120 rocks. How many total rocks do they have?



Bonus: If Will collected 20 rocks that were not valuable. How many rocks were valuable?

2) Adam and Lindsay bought a new gaming system. Adam brought \$128 and Lindsay brought \$185. How much money do they have left?



3) Becky's car is full of gas and can drive 500km on a full tank. She drove 100km to Ottawa on one weekend and then 240km to Toronto the next weekend. How many more km can she drive?



Subtracting Decimals – Tenths – No Borrowing**Questions**

Use the standard algorithm to solve the subtraction problems below.

1)
$$\begin{array}{r} 55.7 \\ - 12.5 \\ \hline \end{array}$$

2)
$$\begin{array}{r} 45.6 \\ - 31.4 \\ \hline \end{array}$$

3)
$$\begin{array}{r} 34.9 \\ - 23.7 \\ \hline \end{array}$$

4)
$$\begin{array}{r} 45.4 \\ - 43.3 \\ \hline \end{array}$$

5)
$$\begin{array}{r} 65.5 \\ - 54.0 \\ \hline \end{array}$$

6)
$$\begin{array}{r} 57.8 \\ - 24.2 \\ \hline \end{array}$$

8)
$$\begin{array}{r} 76.8 \\ - 23.3 \\ \hline \end{array}$$

9)
$$\begin{array}{r} 337.3 \\ - 114.3 \\ \hline \end{array}$$

10)
$$\begin{array}{r} 448.8 \\ - 336.0 \\ \hline \end{array}$$

11)
$$\begin{array}{r} 762.6 \\ - 422.3 \\ \hline \end{array}$$

12)
$$\begin{array}{r} 434.9 \\ - 122.6 \\ \hline \end{array}$$

13)
$$\begin{array}{r} 54.3 \\ - 144.3 \\ \hline \end{array}$$

15)
$$\begin{array}{r} 351.9 \\ - 121.5 \\ \hline \end{array}$$

Word Problems

Answer the questions below.

1) Lucas cycled a total of 52.7 kilometers on Saturday. If he cycled 21.4 kilometers on Sunday, how much farther did he cycle on Saturday than on Sunday?

2) A water bottle can hold up to 3.5 liters of water. If Emily drinks 1.2 liters from it, how much water is left in the bottle?

Subtracting Decimals – Borrowing

Questions

Use the standard algorithm to solve the subtraction problems below

1)
$$\begin{array}{r} 73.74 \\ - 15.56 \\ \hline \end{array}$$

2)
$$\begin{array}{r} 75.47 \\ - 63.74 \\ \hline \end{array}$$

3)
$$\begin{array}{r} 34.46 \\ - 22.63 \\ \hline \end{array}$$

4)
$$\begin{array}{r} 52.54 \\ - 14.53 \\ \hline \end{array}$$

5)
$$\begin{array}{r} 24.54 \\ - 12.72 \\ \hline \end{array}$$

6)
$$\begin{array}{r} 26.16 \\ - 17.33 \\ \hline \end{array}$$

8)
$$\begin{array}{r} 48.25 \\ - 27.63 \\ \hline \end{array}$$

9)
$$\begin{array}{r} 582.85 \\ - 556.24 \\ \hline \end{array}$$

10)
$$\begin{array}{r} 797.28 \\ - 544.66 \\ \hline \end{array}$$

11)
$$\begin{array}{r} 952.64 \\ - 245.37 \\ \hline \end{array}$$

12)
$$\begin{array}{r} 757.23 \\ - 553.52 \\ \hline \end{array}$$

13)
$$\begin{array}{r} 36.58 \\ - 323.57 \\ \hline \end{array}$$

15)
$$\begin{array}{r} 714.85 \\ - 321.31 \\ \hline \end{array}$$

Word Problems

Answer the questions below.

1) The class collected \$695.99 for their field trip. After spending \$422.58 on bus rental, how much money is left for activities?

2) A theatre group had 173.75 meters of fabric. They used 139.58 meters for costumes. How much fabric remains?

Calculating Change Using \$2

Questions

Calculate how much change you will get.

Money Used and Item	Change Due
1) 	_____
2) 	_____
3) 	_____
4) 	_____
5) 	_____

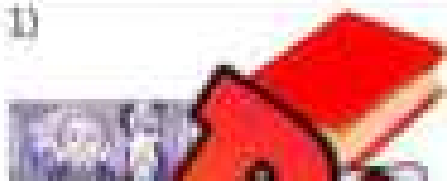






Money Used and Item	Change Due
6) 	_____
7) 	_____
8) 	_____
9) 	_____
10) 	_____

PREVIEW




Calculating Change Using \$10

Questions

Calculate how much change you will get

Money Used and Item	Change Due	Money Used and Item	Change Due
1) 	_____	6)  \$5.00	_____
2)  \$2.00	_____	7)  \$6.50	_____
3)  \$5.00	_____	8)  \$0.50	_____
4)  \$9.00	_____	9)  \$4.00	_____
5)  \$3.00	_____	10)  \$1.00	_____


Giving Change Using Coins

Money Used	Item	Change Due	Coins
		\$3	

Questions

Fill in the table to provide change to your customer.

Money Used	Item	Change Due	Draw Coins
			

Money Used	Item	Change Due	Draw Coins
			

Money Used	Item	Change Due	Draw Coins
			

Money Used	Item	Change Due	Draw Coins
			

Money Used	Item	Change Due	Draw Coins
			

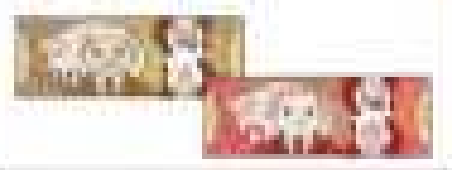
Adding Money

Questions

Fill in the table to provide change to your customer.

		Total
\$ _____	\$ _____	\$ _____

		Total
\$ _____	\$ _____	\$ _____

		Total
\$ _____	\$ _____	\$ _____

		Total
\$ _____	\$ _____	\$ _____


		Total
\$ _____	\$ _____	\$ _____

Adding Multiple Items


Questions

Add up the total price of the items

 \$4.00	 \$3.00	Total
\$ _____	\$ _____	\$ _____




 \$22.00	 \$14.00	Total
\$ _____	\$ _____	\$ _____

 \$38.00	 \$49.00	Total
\$ _____	\$ _____	\$ _____

 \$8.00	 \$16.00	Total
\$ _____	\$ _____	\$ _____

 \$17.00	 \$18.00	Total
\$ _____	\$ _____	\$ _____

Providing Change to Customers

Money Used	Item	Item	Change Due
			\$1.50

Questions

Add up the items and provide change based on what the customer paid with.

Money Used	Item	Item	Change Due
			_____

Money Used	Item	Item	Change Due
			_____

Money Used	Item	Item	Change Due
			_____

Money Used	Item	Item	Change Due
			_____

Money Used	Item	Item	Change Due
			_____

Money Word Problems

Questions

Answer the word problems below

1) Jim was shopping for a basketball and a pump. The pump is \$6, and the basketball is \$16. He hands the cashier \$25. How much change will he get?



2) Paul went to a shop. A customer orders 2 ice cream cones for \$4. They hand him \$10. How much change does he need to give back?



3) Ally went to the movies tonight with her friends. She paid for her movie ticket, \$6 for her popcorn, and \$4 for her drink. How much did she spend?

4) Lexi has saved enough money to buy a game for her computer. It costs \$44 and she hands the cashier a \$50 bill. Will she have enough money left to buy a \$5 ice cream?



Money Word Problems – Adding 2 Items

Questions

Answer the word problems below

1) Finnegan is shopping at a sports store. He puts a skateboard and a water bottle in his cart. The skateboard is \$22.50, and the bottle is \$4.75. He hands the cashier \$30. How much change will he get back?



2) Courtney is at a sandwich shop. She buys a turkey sub for \$6.70 and a vegetable sub for \$4.40. She hands the cashier \$20. How much change will she get back?



3) Kalin works at a restaurant. A customer orders a burger for \$6.40 and fries for \$4.50. The customer gives Kalin \$20. How much change does Kalin owe the customer?



Unit Quiz – Adding and Subtracting

Part 1

Adding

	Thousands	Hundreds	Tens	Ones
	5			5
+	3			

	Thousands	Hundreds	Tens	Ones
	7	5	6	1
+	2	4	2	7

	Thousands	Hundreds	Tens	Ones
	3	4	6	7
+	3	5	2	5

	Thousands	Hundreds	Tens	Ones
	4	3	8	5
+	2	3	4	7

	Thousands	Hundreds	Tens	Ones
	1	3		
+	4	4		

	Thousands	Hundreds	Tens	Ones
	7	2		8
+	4	6		4

Part 2

Solve

1) $2143 + 3424$

2) $1653 + 4845$

Part 3

Subtracting

	Thous.	Hund.	Tens	Ones
	6	5	5	2
-	1	4	4	2

	Thous.	Hund.	Tens	Ones
	8	6	5	6
-	3	3	3	0

	Thous.	Hund.	Tens	Ones
	5	4	5	5
-	4	3	3	3

	Thous.	Hund.	Tens	Ones
	5	9	3	4
-	3	7	6	9

	Thous.	Hund.	Tens	Ones
	3	3	3	3
-	1	8	0	0

	Thous.	Hund.	Tens	Ones
	4	2	5	3
-	1	5	3	6

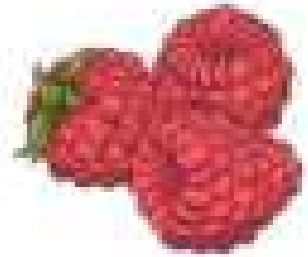
Part 4

Solve

1) $7685 - 2142$

2) $8376 - 5184$

1) Suzanne is a raspberry picker at a farm. She picked 2653 raspberries last week and 4765 raspberries this week. How many raspberries did she pick in total in the last 2 weeks?



2) Lamar bought a burger and drink for dinner. The burger was \$6.50 and the drink was \$2.25. How much did Lamar spend on his dinner?



3) Lindsay had \$7493 to spend on a new boat. She spent the money buying a boat for \$6357. How much money does she have left?



4) Hanna bought an ice cream cone for \$4.75. She gave the cashier \$10.00. How much change did she get back?

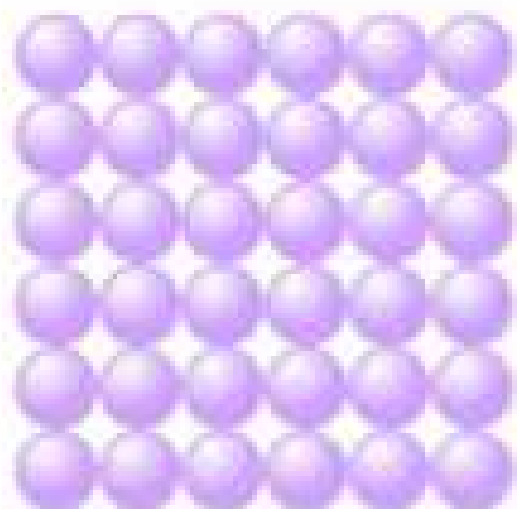




$0 \cdot 7 =$	0
$1 \cdot 7 =$	7
$2 \cdot 7 =$	14
$3 \cdot 7 =$	21
$4 \cdot 7 =$	28
$5 \cdot 7 =$	35
$6 \cdot 7 =$	42
$7 \cdot 7 =$	49
$8 \cdot 7 =$	56
$9 \cdot 7 =$	63
$10 \cdot 7 =$	70
$11 \cdot 7 =$	77

N.3

Students explain properties of prime and composite numbers using multiplication and division.



Introduction to Factors

Instructions

List all of the factors for the numbers below

1) 12 _____

2) 25 _____

3) 21 _____

4) 16 _____

5) 43 _____

6) 29 _____

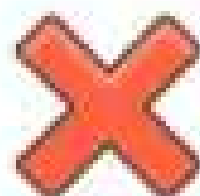
7) 6 _____

8) 10 _____

9) 15 _____

10) 20 _____

PREVIEW



Find The Factors

**Instructions:**

Circle all the factors of the number listed

1) 10

8 2 9 4
3 10 5

2) 8

8 2 6 4
3 1 7 5

3) 47

23 2
3 47

4) 18

1 9 6 4
8 2 3 18

5) 22

22 2 7 3
11 1 10 6

6) 25

2 25
1 4

7) 24

8 2 4 6
3 1 24 12

8) 58

2 30 27 3
6 1 29 58

9) 86

2 44 1 52
43 3 86 8

10) 63

3 21 2 63
9 1 15 7

PREVIEW

Finding Prime and Composite Numbers



Part 1

Follow the directions below

1) Circle the prime numbers below

11	15	7	18	3	5
13	19	33	49	52	45
		67	90	81	74

2) Circle the composite numbers below

6	11	13	19	25
50	43	55	21	
47	54	62	7	63

Part 2

Write the numbers from the pair under the correct heading

	Pairs of Numbers	Prime	Composite
1)	22, 5		
2)	12, 17		
3)	23, 25		
4)	41, 49		
5)	59, 52		
6)	67, 16		
7)	73, 81		
8)	89, 95		

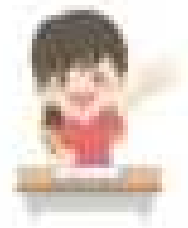
Prime vs Composite Numbers

Instructions:

Colour prime numbers one colour and composite numbers a different colour



Type of Number	Colour
Composite Number	
Prime Number	



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Composite Number Maze

Instructions

Help Angela get to school by colouring a composite number path.

7	19	29	37	67	71	61	83			
97	67	51	32	45	46	25	10			
79	2	9	29	97	83	53	43	13		
5	50	76	74	7	5	2	11	5		
3	7	41	23	7	29	41	6	7		
74	55	52	92	95	13	67	9	17		
98	17	61	41	89	23	59	71	39		
100	70	39	40	68	65	79	83	29		89
2	19	83	67				61	59		73
11	59	73	59				53	67		61

Introduction to Multiples

Instructions

List the first 5 multiples for each number

Example

2

2, 4, 6, 8, 10



1)

2)

10

3)

3

4)

4

5)

7

6)

9

7)

6

8)

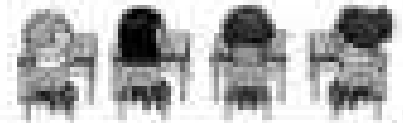
8

PREVIEW

Identifying Multiples

Instructions

Circle the multiples of the number



1) 3

2 5 9 12
15 11 6

2) 5

8 21 10 25
15 20 13 24

3) 4

8 11
20 16 15

4) 6

8 15 12 20
30 14 24 18

5) 2

4 3 1 8
7 10 6 9

6)

21 14 35 20 11

7) 8

16 21 8 32
35 40 13 24

8) 10

50 25 30 21
10 20 36 41

PREVIEW

Greatest Common Factor

Instructions

List the factors and write the greatest common factor (GCF)

1)

12 _____

18 _____

GCF =

2)

15 _____

25 _____

GCF =

3)

35 _____

28 _____

GCF =

4)

16 _____

4 _____

GCF =

5)

32 _____

48 _____

GCF =

6)

24 _____

16 _____

GCF =

7)

16 _____

48 _____

GCF =

8)

27 _____

9 _____

GCF =

9)

54 _____

36 _____

GCF =

10)

64 _____

56 _____

GCF =

PREVIEW

Name: _____

Greatest Common Factor

Instructions

List the factors and write the greatest common factor (GCF).

1)
30 _____
24 _____
36 _____

2)
40 _____
10 _____
70 _____

GCF =

3)
35 _____
20 _____
50 _____

4)
28 _____

GCF =

GCF =

5)
27 _____
45 _____
72 _____

6)
36 _____
24 _____
54 _____

GCF =

GCF =

7)
32 _____
44 _____
28 _____

8)
55 _____
77 _____
33 _____

GCF =

GCF =

PREVIEW

Greatest Common Factor - Riddle

Questions

Find the GCF and match the letter to the numbers above. Notice there are 2 D's, T's and S's! You'll need to decide where to place the letter.

The more you take, the more you leave behind. What am I?

4		12	24	3	15	25	5	

S (15, 20)	D (48, 56)	P (50, 75)
T (48, 36)	F (16, 28)	D (14)
S (48, 72)	T (9, 15)	E (60, 45)

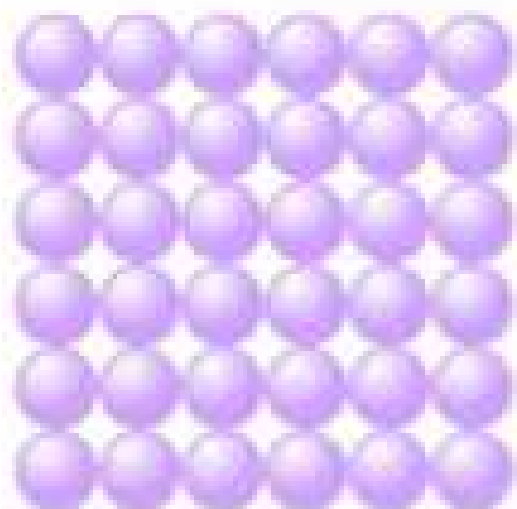
PREVIEW



$0 \cdot 7 =$	0
$1 \cdot 7 =$	7
$2 \cdot 7 =$	14
$3 \cdot 7 =$	21
$4 \cdot 7 =$	28
$5 \cdot 7 =$	35
$6 \cdot 7 =$	42
$7 \cdot 7 =$	49
$8 \cdot 7 =$	56
$9 \cdot 7 =$	63
$10 \cdot 7 =$	70
$11 \cdot 7 =$	77

N.4

Students multiply and divide natural numbers within 10 000.



Number Line Multiplication – Repeated Addition**Questions**

Fill in the blanks below

1) $3 \times 3 = 9$



2) $6 \times 3 =$ _____



3) $5 \times 4 =$ _____



4) $7 \times 2 =$ _____



5) $2 \times 9 =$ _____



6) $5 \times 7 =$ _____



7) $9 \times 6 =$ _____



8) $6 \times 6 =$ _____

**PREVIEW**

Word Problem: Repeated Addition

Questions

Solve the word problems below.



Questions	Answers
1) Flower Pots: Ava is planting flowers. She plants 3 flowers in pot one, 3 flowers in pot two, 3 flowers in pot three, 3 flowers in pot four, and 3 flowers in pot five. How many flowers does she plant in total?	
2) Pencils: Jayden is buying pencils for his classmates. He buys one pack of 4 pencils, another pack of 4 pencils, another pack of 4 pencils, another pack of 4 pencils, and one more pack of 4 pencils. How many pencils did he buy in total?	
3) Baking Cookies: Emma is baking cookies. She bakes 7 cookies in one batch, 7 more cookies in a second batch, and 7 cookies in a third batch. How many cookies does she bake altogether?	
4) Saving Stickers: Jayden saves stickers every day. He saves 2 stickers on day one, 2 stickers on day two, 2 stickers on day three, 2 stickers on day four, 2 stickers on day five, 2 stickers on day six, and 2 stickers on day seven. How many stickers will Jayden have after seven days?	
5) Candy Land: A group of friends goes to a candy store. Steve buys 9 candies. Emily buys 9 candies. Rachel buys 9 candies. James buys 9 candies. Courtney buys 9 candies. Aramus buys 9 candies. How many total candies did the friends buy together?	
6) Book Pages: Clara has read 8 chapters in her book. Chapter 1 had 7 pages. Chapter 2 had 7 pages. Chapter 3 had 7 pages. Chapter 4 had 7 pages. Chapter 5 had 7 pages. Chapter 6 had 7 pages. Chapter 7 had 7 pages. Chapter 8 had 7 pages. How many total pages did she read?	

Number Line Division – Repeated Subtraction

Questions

Use repeated subtraction to find the answer

Start at the larger number and subtract the smaller number until you reach zero. Your answer is how many times you subtracted.

1) $20 \div 2 = 10$



2) $20 \div 5 =$



3) $12 \div 3 =$



4) $18 \div 6 =$



5) $15 \div 3 =$



6) $32 \div 8 =$



7) $36 \div 4 =$



8) $40 \div 5 =$

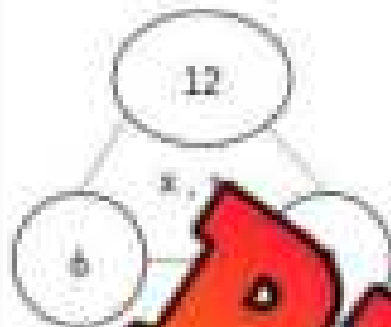


PREVIEW

Multiplication and Division

Questions

Investigate the relationship between multiplication and division

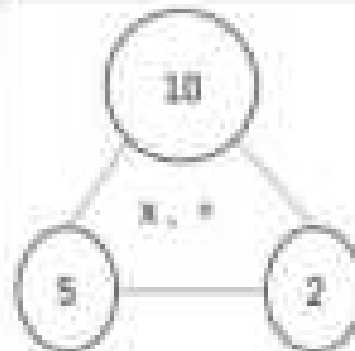


$$6 \times 2 = 12$$

$$2 \times 6 = 12$$

$$12 \div 6 = 2$$

$$12 \div 2 = 6$$

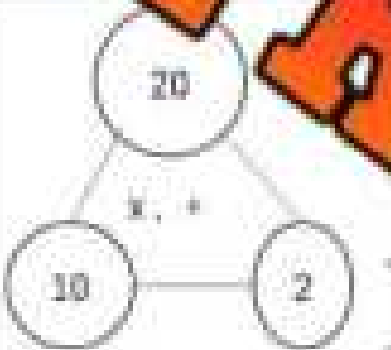


$$__ \times __ = __$$

$$__ \times __ = __$$

$$__ \div __ = __$$

$$__ \div __ = __$$

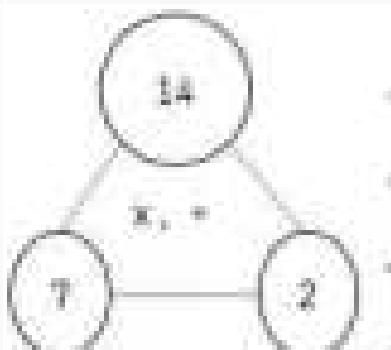


$$__ \times __ = __$$

$$__ \times __ = __$$

$$__ \div __ = __$$

$$__ \div __ = __$$

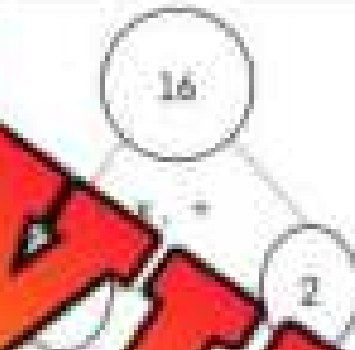


$$__ \times __ = __$$

$$__ \times __ = __$$

$$__ \div __ = __$$

$$__ \div __ = __$$

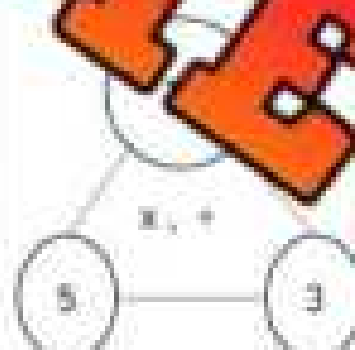


$$__ \times __ = __$$

$$__ \times __ = __$$

$$__ \div __ = __$$

$$__ \div __ = __$$

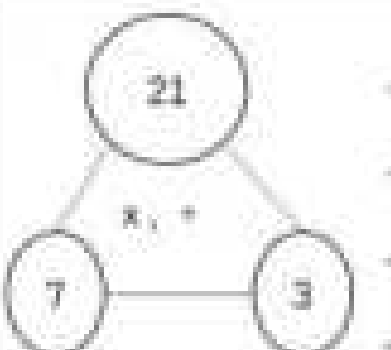


$$__ \times __ = __$$

$$__ \times __ = __$$

$$__ \div __ = __$$

$$__ \div __ = __$$

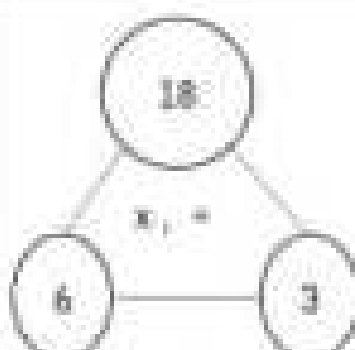


$$__ \times __ = __$$

$$__ \times __ = __$$

$$__ \div __ = __$$

$$__ \div __ = __$$



$$__ \times __ = __$$

$$__ \times __ = __$$

$$__ \div __ = __$$

$$__ \div __ = __$$

Multiplication – Arrays

Part 1

Write the equations for the arrays below

 _____	 _____	 _____
 _____	 _____	 _____

Part 2

Draw an array based on the equation below

$5 \times 4 =$ _____	$8 \times 3 =$ _____	$2 \times 7 =$ _____
$5 \times 7 =$ _____	$9 \times 3 =$ _____	$8 \times 4 =$ _____

PREVIEW

Word Problems: Multiplication Using Arrays



Questions

Solve the word problems below

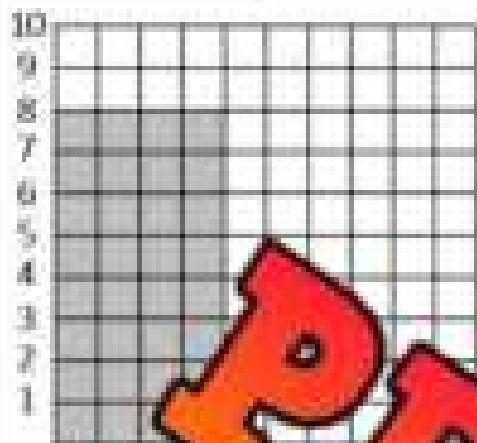
	Word Problems for Arrays in Multiplication	Array
1	Alice is arranging her toy cars in rows. She places 5 cars in each row and makes 3 rows. How many toy cars does Alice have in total? Try drawing this using an array.	
2	For a science project, Ben needs to display his rock collection. He puts them in 4 rows with 6 rocks in each row. Can you help him out? How many rocks he has by drawing an array.	
3	In the school cafeteria, Lisa puts 5 plates on each shelf, and there are 2 shelves. How many plates are there altogether? Draw an array to show how many shelves.	
4	Daisy is planting flowers in her garden in a pattern. She plants 4 flowers in each row and makes 5 rows. Draw an array to find out how many flowers Daisy plants in her garden.	
5	Evan is organizing his books on shelves. If he puts 8 books on each shelf and has 3 shelves, how many books does Evan have? Make an array to solve this.	
6	For a bake sale, Fiona prepares cookies and places them in boxes. Each box holds 5 cookies and she prepares 6 boxes. How many cookies did Fiona prepare? Draw an array to represent the cookies in boxes.	

PREVIEW

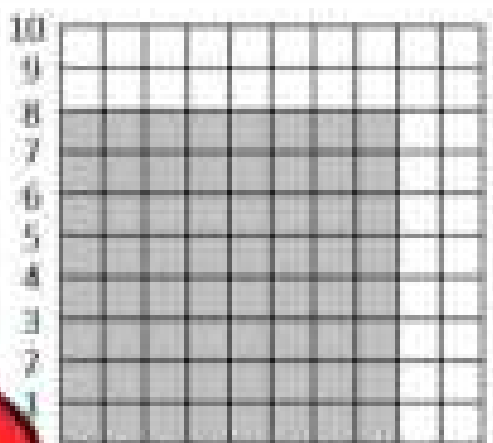
Multiplication - Arrays

Questions

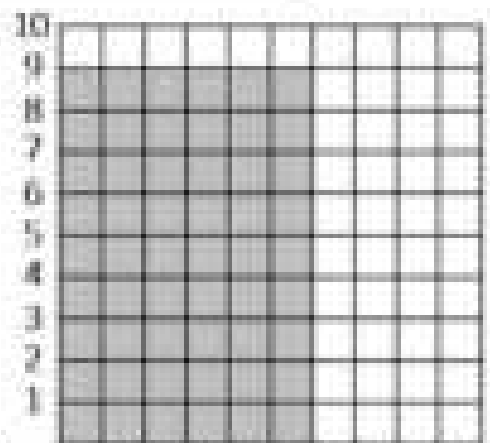
How much is shaded in? Answer the questions below



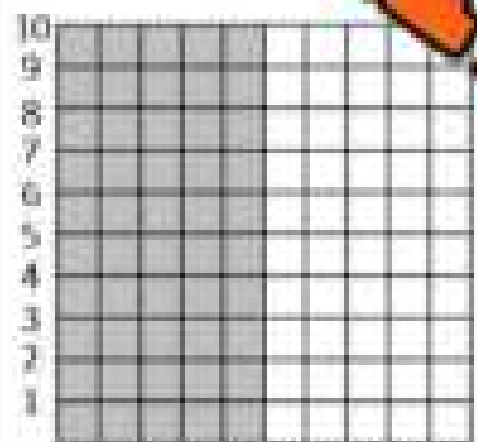
$8 \times 4 = \underline{\quad}$



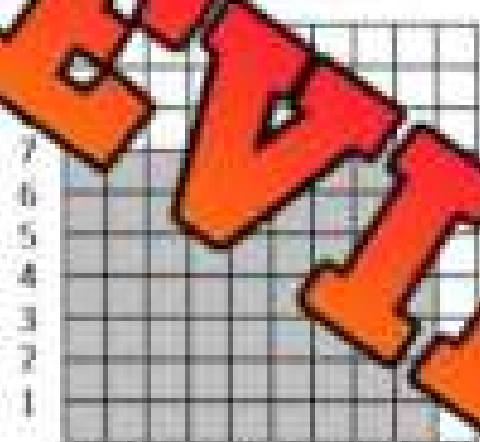
$8 \times \underline{\quad} = \underline{\quad}$



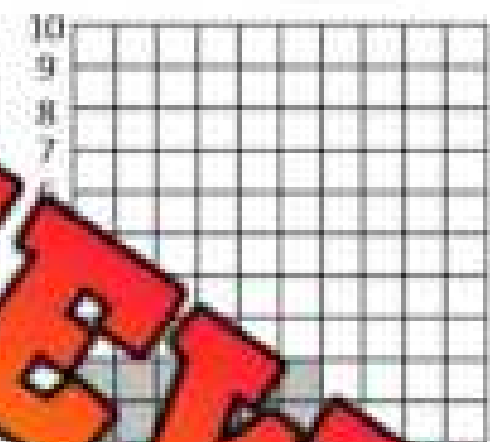
$9 \times 6 = \underline{\quad}$



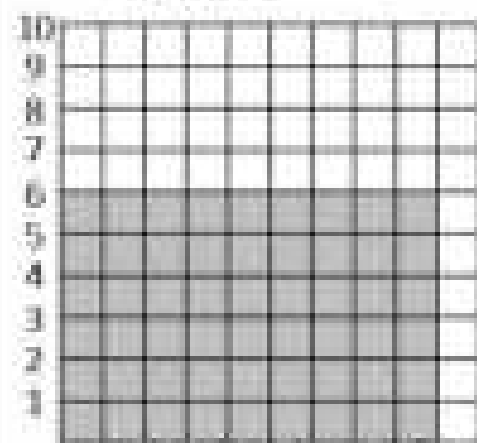
$10 \times 5 = \underline{\quad}$



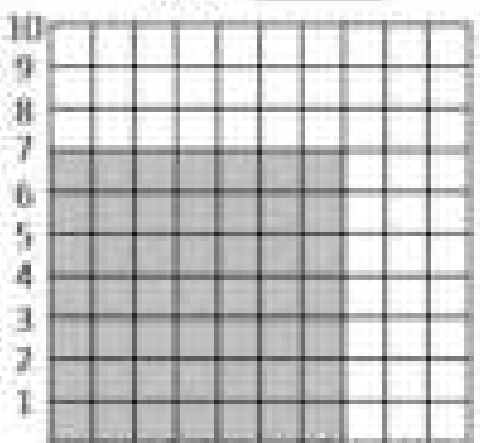
$7 \times 9 = \underline{\quad}$



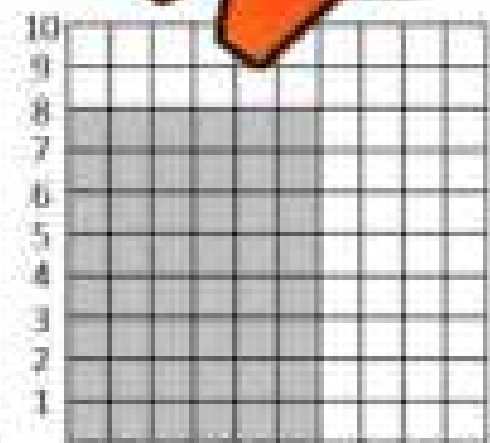
$7 \times \underline{\quad} = \underline{\quad}$



$6 \times 9 = \underline{\quad}$



$7 \times 7 = \underline{\quad}$



$8 \times 6 = \underline{\quad}$

PREVIEW

Mental Math - Multiplication – Skip Counting

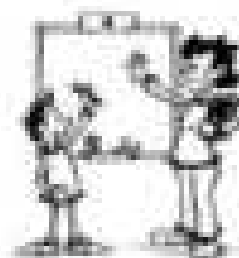
Directions:

1. Decide which number is easier to count by
2. Count by that number the other number amount of times.

$$7 \times 5 = ?$$

1 2 3 4 5 6 7

5, 10, 15, 20, 25, 30, 35



$$9 \times 3$$

$$6 \times 5$$

$$7 \times 6$$

$$9 \times 5$$

$$11$$

$$4 \times 9$$

$$8 \times 9$$

PREVIEW

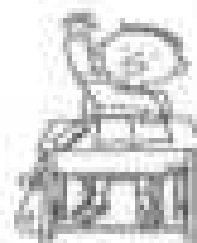
Mental Math - Multiplication – Skip Counting

Directions:

1. Decide which number is easier to count by
2. Count by that number the other number amount of times.

$$7 \times 5 = 7$$

1 2 3 4 5 6 7
5, 10, 15, 20, 25, 30, 35



11×7

13×6

17×4

18×5

15

14×6

16×7

PREVIEW

Mental Math - Multiplication – Breaking Up Numbers

Directions

1. Break up one of the numbers into friendlier numbers (two-digit number into one)
2. Multiply the other number by the two friendlier numbers.
3. Add the two answers together.

Example



$$\begin{array}{c}
 16 \times 4 \\
 10 \times 4 \text{ and } 6 \times 4 \\
 \downarrow \qquad \downarrow \\
 40 \qquad 24 \\
 \swarrow \quad \searrow \\
 64
 \end{array}$$



PREVIEW

16×7

15×4

6

18×7

15×7

14×6

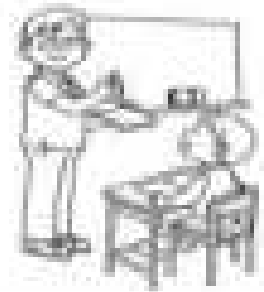
16×6

Mental Math - Multiplication – Doubling and Halving**Directions**

1. Halve one of the numbers and double the other number (2 options)
2. Multiply the new numbers together

Example

$$\begin{array}{ccc} & 14 \times 4 & \\ \text{Option 1: } & 28 \times 2 & \text{or Option 2: } 7 \times 8 \\ & \downarrow & \downarrow \\ & 56 & 56 \end{array}$$



PREVIEW

16×8

14×6

18×6

18×4

15×4

16×6

16×10

19×4

17×4

Multiplying by Multiples of Ten

Key Concept

Multiply the first numbers together and add a zero when multiplying by a multiple of 10

Examples - $10 \times 9 = 90$

$30 \times 6 = 180$

$60 \times 8 = 480$

$800 \times 4 = 3\,200$

Questions

Answer the questions below using the key concept above

	$\times 10$
2	
5	
7	
3	
4	
6	
8	

	$\times 30$
2	
3	
5	
9	

	$\times 50$
2	
6	
3	
7	
4	

	$\times 700$
2	
5	
7	
3	
4	
6	
8	

	$\times 400$
2	
6	
7	
4	
3	
5	
9	

	$\times 20$
2	
6	
3	
7	
4	
5	
9	

Activity: Multiplication Race

Objective

What are we learning about?

Students will practise their multiplication facts and multiples of 10 by racing to answer questions quickly and accurately.

Materials

What you will need for the activity.

- Index cards
- Markers or pens
- Timer (optional)



Instructions

How you will run the activity.

1. Prepare a stack of index cards with multiplication questions. Include a mix of simple multiplication facts (e.g., 3×4 , 6×7) and multiples of 10 (e.g., 5×50 , 7×70).
2. Have students line up in a single file (or you can have groups at desks).
3. Call the first two students in line to the front. Explain that they will compete to answer the multiplication question that the teacher pulls from the stack.
4. Pull a card from the stack and read the question aloud. The first student to answer correctly wins the round.
5. The student who answers correctly stays at the front to compete against the next student in line. The student who loses goes to the end of the line.
6. Optional: If a student wins five rounds in a row, they move to the back of the line to give others a chance to play.
7. Continue the game until all students have had a chance to compete multiple times or until the designated game time is up.

Math Cards

Cut out the math cards below

3×8

7×50

PREVIEW

11×10

10×12

8×30

4×3

Math Cards

Cut out the math cards below

8×4

10×5

PREVIEW

6×1

8×60

9×40

3×6

4×50

Math Cards

Cut out the math cards below

5×120

90×4

PREVIEW

5×8

7×40

2×6

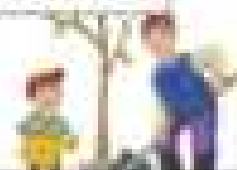
8×11

70×5

Estimating Products – Word Problems

Questions

Solve the word problems below



Questions	Answers
<p>1) Oliver is saving up for a new bicycle. Each month, he saves \$235. If he saves the same amount for 3 months, how much will he have saved in total? Can you give an estimate?</p>	
<p>2) Sophia is collecting cans for a recycling project. She collects 124 cans each day. If she works for 5 days, how many cans will Sophia collect? Give your best estimate.</p>	
<p>3) Ethan's family is planning to plant trees in their back yard. They want to plant 112 trees in each row and plan to have 4 rows. How many trees will they plant altogether? What is your estimate?</p>	
<p>4) Mia is practicing her typing skills. She types about 158 words in 5 minutes. How many words can Mia type in 20 minutes? Can you estimate the total number of words?</p>	
<p>5) Aiden is buying notebooks for school. Each notebook costs \$102. If he buys 8 notebooks, how much money will Aiden spend in total? Please provide an estimate.</p>	

PREVIEW

Multiplication – 2 x 1 Digits**Questions**

Use the standard algorithm to solve the multiplication problems below

1)
$$\begin{array}{r} 53 \\ \times 2 \\ \hline \end{array}$$

2)
$$\begin{array}{r} 35 \\ \times 4 \\ \hline \end{array}$$

3)
$$\begin{array}{r} 45 \\ \times 3 \\ \hline \end{array}$$

4)
$$\begin{array}{r} 39 \\ \times 5 \\ \hline \end{array}$$

5)
$$\begin{array}{r} 64 \\ \times 0 \\ \hline \end{array}$$

6)
$$\begin{array}{r} 44 \\ \times 4 \\ \hline \end{array}$$

8)
$$\begin{array}{r} 88 \\ \times 4 \\ \hline \end{array}$$

9)
$$\begin{array}{r} 58 \\ \times 3 \\ \hline \end{array}$$

10)
$$\begin{array}{r} 275 \\ \times 1 \\ \hline \end{array}$$

11)
$$\begin{array}{r} 76 \\ \times 5 \\ \hline \end{array}$$

12)
$$\begin{array}{r} 62 \\ \times 1 \\ \hline \end{array}$$

13)
$$\begin{array}{r} 85 \\ \times 2 \\ \hline \end{array}$$

15)
$$\begin{array}{r} 87 \\ \times 3 \\ \hline \end{array}$$

16)
$$\begin{array}{r} 32 \\ \times 2 \\ \hline \end{array}$$

17)
$$\begin{array}{r} 56 \\ \times 0 \\ \hline \end{array}$$

18)
$$\begin{array}{r} 52 \\ \times 1 \\ \hline \end{array}$$

19)
$$\begin{array}{r} 37 \\ \times 4 \\ \hline \end{array}$$

20)
$$\begin{array}{r} 81 \\ \times 1 \\ \hline \end{array}$$

21)
$$\begin{array}{r} 45 \\ \times 4 \\ \hline \end{array}$$

22)
$$\begin{array}{r} 54 \\ \times 3 \\ \hline \end{array}$$

23)
$$\begin{array}{r} 77 \\ \times 4 \\ \hline \end{array}$$

24)
$$\begin{array}{r} 86 \\ \times 5 \\ \hline \end{array}$$

25)
$$\begin{array}{r} 95 \\ \times 0 \\ \hline \end{array}$$

PREVIEW

Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class.

Name: _____

Use the standard algorithm to solve the multiplication problems below.

1)			
		7	2
x	3		6

3) 45×2

Name: _____

Use the standard algorithm to solve the multiplication problems below.

1)			
	4	7	
x		3	

3) 45×2

4) $\begin{array}{r} 27 \\ \times 2 \end{array}$

Name: _____

Use the standard algorithm to solve the multiplication problems below.

1)			
	4	7	
x		3	

3) 45×2

4) $\begin{array}{r} 27 \\ \times 2 \end{array}$

Name: _____

Use the standard algorithm to solve the multiplication problems below.

1)			
	4	7	
x		3	

3) 45×2

4) $\begin{array}{r} 27 \\ \times 2 \end{array}$

Multiplication – 3 x 1 Digits**Questions**

Use the standard algorithm to solve the multiplication problems below.

1)
$$\begin{array}{r} 533 \\ \times 2 \\ \hline \end{array}$$

2)
$$\begin{array}{r} 535 \\ \times 6 \\ \hline \end{array}$$

3)
$$\begin{array}{r} 462 \\ \times 3 \\ \hline \end{array}$$

4)
$$\begin{array}{r} 749 \\ \times 4 \\ \hline \end{array}$$

5)
$$\begin{array}{r} 621 \\ \times 0 \\ \hline \end{array}$$

6)
$$\begin{array}{r} 134 \\ \times 7 \\ \hline \end{array}$$

8)
$$\begin{array}{r} 138 \\ \times 2 \\ \hline \end{array}$$

9)
$$\begin{array}{r} 534 \\ \times 3 \\ \hline \end{array}$$

10)
$$\begin{array}{r} 177 \\ \times 1 \\ \hline \end{array}$$

11)
$$\begin{array}{r} 726 \\ \times 5 \\ \hline \end{array}$$

12)
$$\begin{array}{r} 642 \\ \times 1 \\ \hline \end{array}$$

13)
$$\begin{array}{r} 835 \\ \times 1 \\ \hline \end{array}$$

15)
$$\begin{array}{r} 817 \\ \times 5 \\ \hline \end{array}$$

16)
$$\begin{array}{r} 132 \\ \times 7 \\ \hline \end{array}$$

17)
$$\begin{array}{r} 526 \\ \times 0 \\ \hline \end{array}$$

18)
$$\begin{array}{r} 152 \\ \times 9 \\ \hline \end{array}$$

19)
$$\begin{array}{r} 137 \\ \times 4 \\ \hline \end{array}$$

20)
$$\begin{array}{r} 817 \\ \times 1 \\ \hline \end{array}$$

21)
$$\begin{array}{r} 435 \\ \times 2 \\ \hline \end{array}$$

22)
$$\begin{array}{r} 554 \\ \times 3 \\ \hline \end{array}$$

23)
$$\begin{array}{r} 277 \\ \times 4 \\ \hline \end{array}$$

24)
$$\begin{array}{r} 984 \\ \times 5 \\ \hline \end{array}$$

25)
$$\begin{array}{r} 795 \\ \times 0 \\ \hline \end{array}$$

PREVIEW

Multiplication – Word Problems

Questions

Solve the problems below.

1) Chloe earns \$8 an hour babysitting. She babysat for 124 hours last month. How much money did she earn babysitting?



2) Carter works at a bakery. His job is to fill bags with bagels. He put 6 bagels into 264 bags today. How many bagels did he put in bags today?



3) Nora drove for 9 hours today at 118km per hour. How many kilometres did she drive?



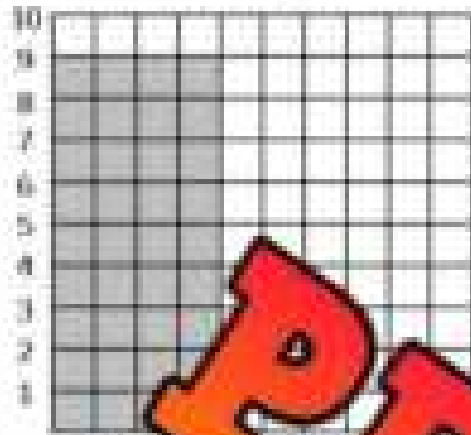
4) Jacob blinks 932 times per hour. How many times did he blink in the last 5 hours?



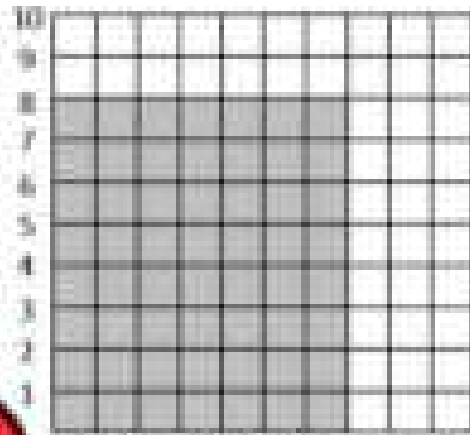
Division - Arrays

Questions

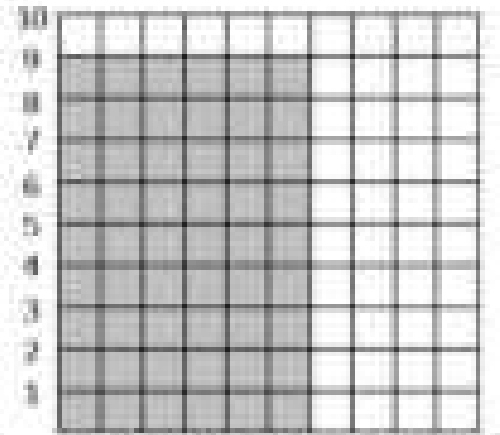
How is the shaded in area divided?



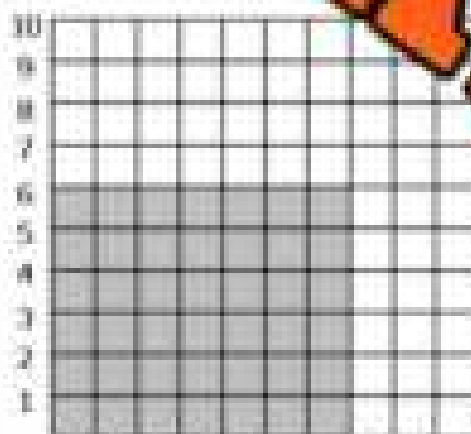
$36 \div 6 = \underline{\quad}$



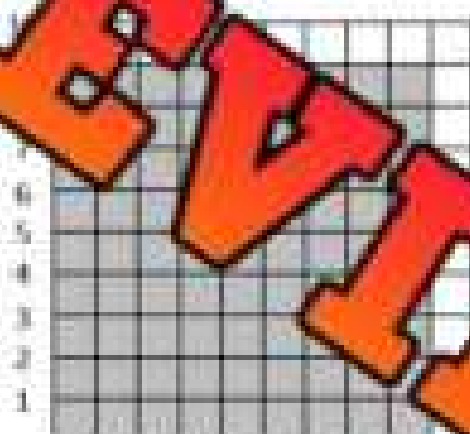
$90 \div 9 = \underline{\quad}$



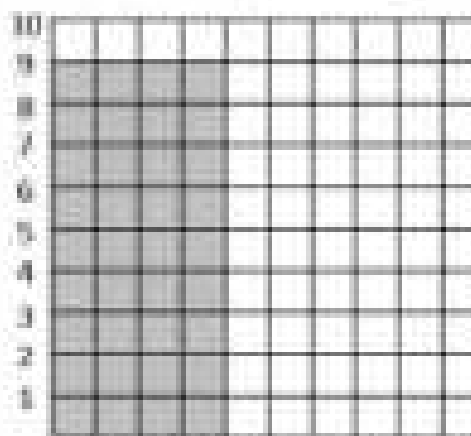
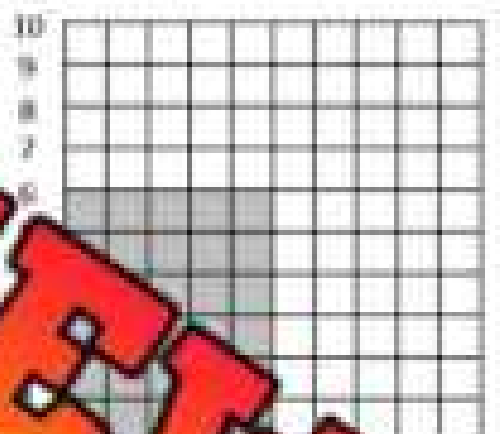
$54 \div 6 = \underline{\quad}$



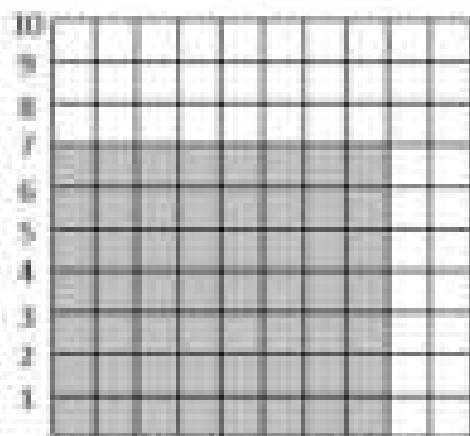
$63 \div 7 = \underline{\quad}$



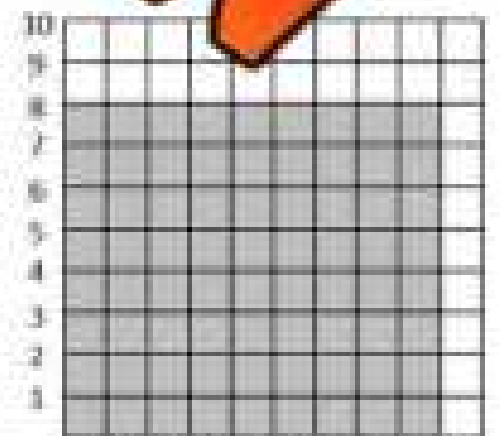
$81 \div 9 = \underline{\quad}$



$36 \div 6 = \underline{\quad}$



$56 \div 8 = \underline{\quad}$



$72 \div 9 = \underline{\quad}$

PREVIEW

Mental Math – Division – Skip Counting

Directions

- Count up by the smaller number to the larger number
- The answer is how many times you counted



$$91 \div 7 = ?$$

1 2 3 4 5 6 7 8 9 10 11 12 13
7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84, 91

Answer = 13



PREVIEW

$$70 \div 5$$

$$64 \div 4$$

$$72 \div 6$$

$$95 \div 5$$

$$96$$

$$96 \div 8$$

$$84 \div 6$$

Mental Math – Division – Splitting Up The Dividend

Directions

1. Break up the larger number (dividend) into friendlier numbers
2. Find out how many times your smaller number (divisor) fits into the new dividends
3. Add up how many times your smaller number fits into your larger numbers

Example

friendly numbers

$$144 \div 6 = 24$$

$$60 \div 6 = 10$$

$$60 \div 6 = 10$$

$$24 \div 6 = 4$$



PREVIEW

$$52 \div 4$$

$$138 \div 6$$

$$85 \div 5$$

$$96 \div 4$$

$$141 \div 7$$

$$184 \div 8$$

$$162 \div 6$$

Division – Bar Model

Questions

Use the bar model to answer the division questions below

1) $64 \div 8$

64						

2) $28 \div 4$

28			

3) $64 \div 8$

64						

4) $100 \div 10$

100									

5) $32 \div 4$

32			

6) $35 \div 5$

35				

7) $21 \div 7$

21		

8) $81 \div 9$

81								

9) $63 \div 7$

63						

10) $44 \div 4$

44			

PREVIEW

Division – Word Problems

Questions

Solve the problems below

1) Daniel earned \$96 today working 8 hours. How much did he earn per hour?



2) Willow studied for 120 minutes for a test she has tomorrow. She has studied the same amount for 5 days. How much did she study for each day?



3) Owen collected 146 candies on Halloween and he divided the candies into 4 groups so he could share them with his 2 brothers. How many candies did each sibling get?

b) How many extra candies were left over?



4) Zoey did 231 pushups last week. She did the same amount each day. How many pushups did she do each day?



Division – Area Model

Questions

Use the area model to answer the division questions below

1) $243 \div 6 = 40 \text{ r}3$

33	7	0
200	40	3
198	42	r3
2		

2) $258 \div 4$

4	200	50
	8	

3) $428 \div 2$

2	400	20
		8

4) $372 \div 6$

6	70	2

5) $612 \div 6$

6	600	10
		2

6) $735 \div 5$

5	700	30
		5

PREVIEW

Division – 3 by 1 – With Remainders**Questions**Solve the division problems below. Use $r =$ to represent the remainders.

1)
$$\begin{array}{r} 20 \text{ r}2 \\ 6 \overline{) 122} \end{array}$$

2)
$$\begin{array}{r} \\ 3 \overline{) 94} \end{array}$$

3)
$$\begin{array}{r} \\ 2 \overline{) 43} \end{array}$$

4)
$$\begin{array}{r} \\ 5 \overline{) 84} \end{array}$$

5)
$$\begin{array}{r} \\ 4 \overline{) 146} \end{array}$$

7)
$$\begin{array}{r} \\ 7 \overline{) 107} \end{array}$$

8)
$$\begin{array}{r} \\ 6 \overline{) 118} \end{array}$$

9)
$$\begin{array}{r} \\ 9 \overline{) 112} \end{array}$$

10)
$$\begin{array}{r} \\ 5 \overline{) 142} \end{array}$$

11)
$$\begin{array}{r} \\ 3 \overline{) 115} \end{array}$$

13)
$$\begin{array}{r} \\ 7 \overline{) 156} \end{array}$$

14)
$$\begin{array}{r} \\ 4 \overline{) 134} \end{array}$$

15)
$$\begin{array}{r} \\ 8 \overline{) 107} \end{array}$$

16)
$$\begin{array}{r} \\ 6 \overline{) 122} \end{array}$$

PREVIEW

Activity: Division Race

Objective

What are we learning about?

Students will practise their division facts by racing to answer questions quickly and accurately.

Materials

What you will need for the activity

- Index cards
- Markers or pens
- Timer (optional)



Instructions

How you will complete it

1. Prepare a stack of index cards with division questions.
2. Have students line up in a single file (or you can have them sit at their desk).
3. Call the first two students in line to the front. Explain the rules and answer the division question that the teacher pulls from the stack.
4. Pull a card from the stack and read the question aloud. The first student to answer correctly wins the round.
5. The student who answers correctly stays at the front to compete against the next student in line. The student who loses goes to the end of the line.
6. Optional: If a student wins five rounds in a row, they move to the back of the line to give others a chance to play.
7. Continue the game until all students have had a chance to compete multiple times or until the designated game time is up.

Math Cards

Cut out the math cards below

$24 \div 12$

$30 \div 5$

PREVIEW

$40 \div 8$

$56 \div 8$

$72 \div 6$

$30 \div 6$

$99 \div 9$

Unit Quiz - Multiplication and Division**Part 1****Solve**

13×6

16×8

$108 \div 9$

$161 \div 7$

	7	5
\times		7

	7	8
\times		3

	7	8	4	2
\times				2

$6 \overline{) 24}$

$2 \overline{) 120}$

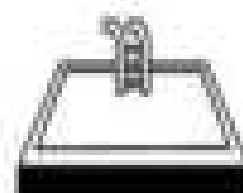
$3 \overline{) 162}$

$5 \overline{) 118}$

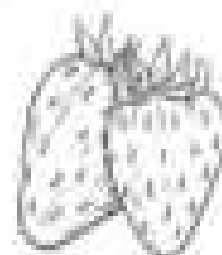
Part 2

Answer the word problems below.

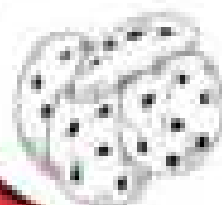
1) Brian put 96 L of water into his pool. He had the hose running for 8 hours. How many L were put into the pool each hour?



2) Everyday for a year (365 days), Joey ate 7 pieces of fruit. How many pieces of fruit did Joey eat?



3) Mrs. Wilson made 84 cookies for her 6 classes. She divided the cookies up to give an equal amount to 6 different classes. How many cookies did each class get?

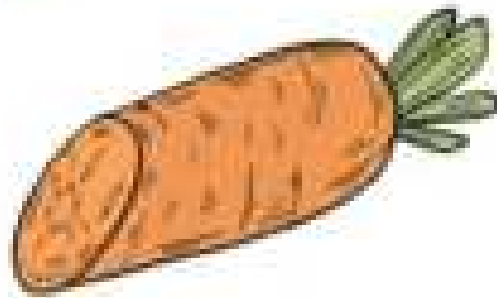
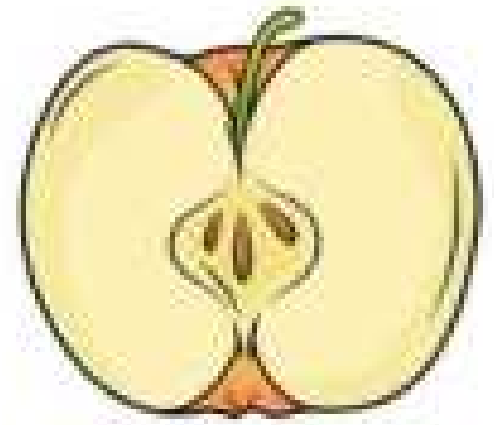
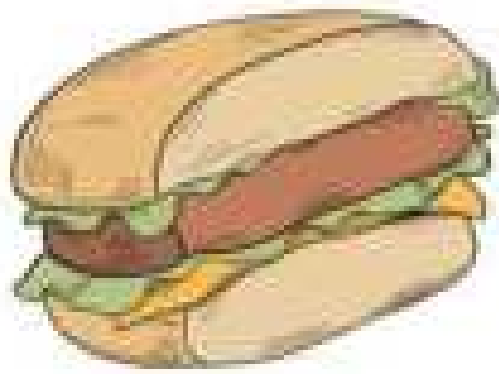


4) a) Tyler spent \$274 each time he filled his boat with gas. He filled his boat up 7 times last summer. How much did he spend on gas?



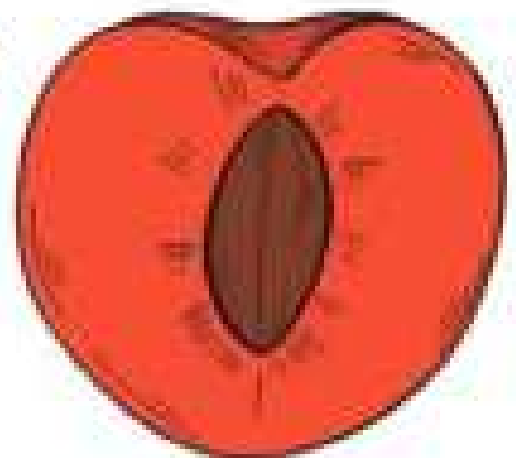
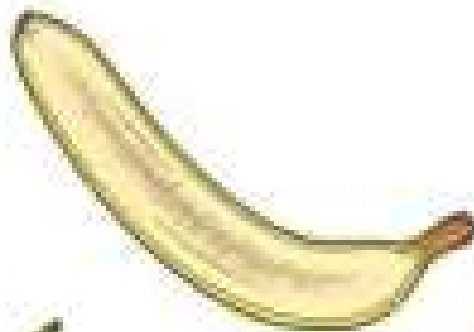
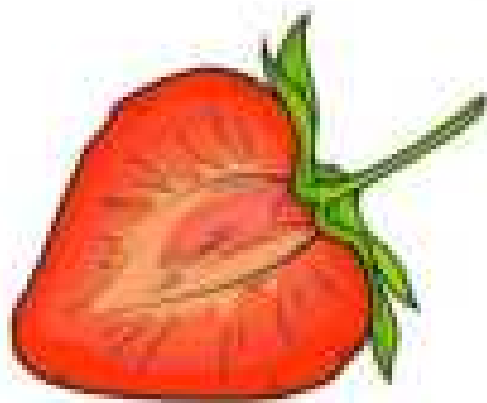
Bonus) If he split the cost of gas with two other friends, how much would each friend owe? (leave the answer in dollars and include any remainder).

PREVIEW



N.5

Students apply equivalence to the interpretation of fractions.



Comparing Common Denominators

If fractions have the same denominator, the larger fraction will have the larger numerator.

For example - $\frac{3}{8} < \frac{4}{8}$

Part 1 Compare the fractions using $>$, $<$, or $=$.

$\frac{2}{5}$ <input type="text"/>	$\frac{6}{8}$ <input type="text"/> $\frac{5}{8}$	$\frac{2}{7}$ <input type="text"/> $\frac{3}{7}$	$\frac{6}{10}$ <input type="text"/> $\frac{5}{10}$
$\frac{5}{5}$ <input type="text"/> $\frac{4}{5}$	<input type="text"/> $\frac{4}{9}$	$\frac{5}{7}$ <input type="text"/> $\frac{6}{7}$	$\frac{7}{9}$ <input type="text"/> $\frac{7}{9}$
$\frac{2}{2}$ <input type="text"/> $\frac{1}{2}$	$\frac{5}{6}$ <input type="text"/> $\frac{4}{5}$	$\frac{2}{4}$ <input type="text"/> $\frac{4}{4}$	

Part 2 Put the fractions in order from least to greatest.

$\frac{2}{10}$	$\frac{3}{10}$	$\frac{5}{10}$	$\frac{6}{10}$	$\frac{7}{10}$	$\frac{10}{10}$
$\frac{2}{9}$	$\frac{1}{9}$	$\frac{5}{9}$	$\frac{1}{9}$	$\frac{9}{9}$	$\frac{4}{9}$

Part 3 Answer the word problem below.

On Wednesday, $\frac{7}{9}$ kids played basketball for free time. On Friday, $\frac{1}{9}$ kids played basketball in their free time. Which day had a greater fraction of kids playing basketball.

Ordering Fractions with Common Denominators**Directions**

Put the fractions in order from least to greatest

1) $\frac{2}{5}$ $\frac{1}{5}$ $\frac{0}{5}$ $\frac{4}{5}$ $\frac{3}{5}$ $\frac{5}{5}$

2) $\frac{7}{8}$ $\frac{4}{8}$ $\frac{5}{8}$ $\frac{2}{8}$ $\frac{1}{8}$

3) $\frac{4}{6}$ $\frac{2}{6}$ $\frac{6}{6}$ $\frac{5}{6}$

4) $\frac{9}{9}$ $\frac{6}{9}$ $\frac{3}{9}$ $\frac{5}{9}$ $\frac{2}{9}$ $\frac{1}{9}$

5) $\frac{3}{10}$ $\frac{8}{10}$ $\frac{10}{10}$ $\frac{7}{10}$ $\frac{6}{10}$

6) $\frac{6}{12}$ $\frac{9}{12}$ $\frac{10}{12}$ $\frac{7}{12}$ $\frac{4}{12}$ $\frac{2}{12}$

7) $\frac{1}{15}$ $\frac{9}{15}$ $\frac{10}{15}$ $\frac{4}{15}$ $\frac{5}{15}$ $\frac{8}{15}$

PREVIEW

Comparing Benchmark Fractions - Halves

We can use our understanding of benchmark fractions to compare and order other fractions.

For example: $\frac{5}{6}$ is greater than $\frac{3}{8}$ because $\frac{5}{6}$ is greater than one half and $\frac{3}{8}$ is less than one half.

Part 1

Circle the fractions that are a half

$\frac{2}{6}$ $\frac{4}{8}$ $\frac{5}{6}$ $\frac{1}{2}$ $\frac{2}{4}$ $\frac{5}{10}$ $\frac{3}{8}$ $\frac{1}{3}$ $\frac{4}{7}$ $\frac{6}{12}$

Part 2

Circle the fractions that are larger than a half

$\frac{2}{5}$ $\frac{3}{7}$ $\frac{5}{7}$ $\frac{7}{8}$ $\frac{4}{10}$ $\frac{3}{8}$ $\frac{5}{6}$ $\frac{8}{13}$

Part 3

Compare the fractions using > or <

$\frac{2}{9}$ <input type="checkbox"/>	$\frac{6}{7}$	$\frac{6}{10}$ <input type="checkbox"/>	$\frac{4}{8}$	$\frac{1}{5}$ <input type="checkbox"/>	$\frac{3}{8}$
$\frac{3}{7}$ <input type="checkbox"/>	$\frac{4}{5}$	$\frac{7}{9}$ <input type="checkbox"/>	$\frac{3}{8}$	$\frac{5}{7}$ <input type="checkbox"/>	$\frac{2}{5}$ <input type="checkbox"/>
$\frac{5}{7}$ <input type="checkbox"/>	$\frac{2}{5}$	$\frac{6}{9}$ <input type="checkbox"/>	$\frac{2}{10}$	$\frac{6}{7}$ <input type="checkbox"/>	$\frac{2}{5}$ <input type="checkbox"/>
				$\frac{5}{9}$ <input type="checkbox"/>	$\frac{4}{10}$

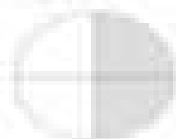
Part 4

Answer the word problem below

Sherry walked $\frac{4}{8}$ of a kilometre to school. Sara walked $\frac{2}{5}$ of a kilometre to school. Who walks further to school each day? How do you know?

Equivalent Fractions

Equivalent fractions are fractions that have the same value. Visualize this...



Pizza 1



Pizza 2

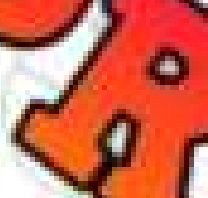
Your family orders large 2 pizzas. The first one is cut into only 4 slices. The second is cut into 8 slices. You could have 2 slices from pizza 1 and 4 slices from 2 and still have the same amount of pizza.

Questions: Shade in the fraction and decide if they are equivalent



$$\frac{1}{4}$$

Yes



$$\frac{3}{6}$$

No



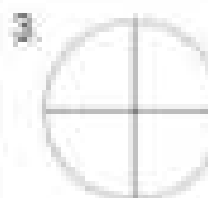
$$\frac{1}{3}$$

Yes



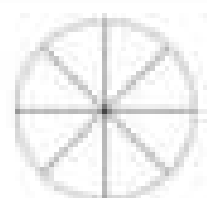
$$\frac{1}{3}$$

No



$$\frac{3}{4}$$

Yes



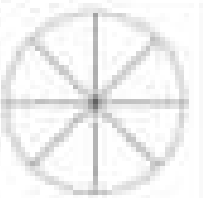
$$\frac{5}{8}$$

No



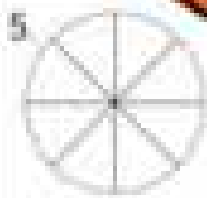
$$\frac{1}{2}$$

Yes



$$\frac{4}{8}$$

No



$$\frac{2}{8}$$

Yes



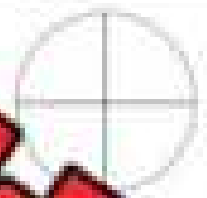
$$\frac{2}{4}$$

No



$$\frac{3}{4}$$

Yes



$$\frac{1}{4}$$

No



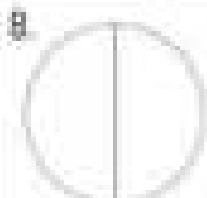
$$\frac{3}{6}$$

Yes



$$\frac{1}{3}$$

No



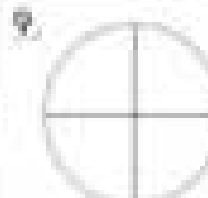
$$\frac{1}{2}$$

Yes



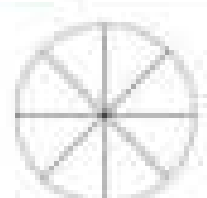
$$\frac{2}{4}$$

No



$$\frac{3}{4}$$

Yes



$$\frac{6}{8}$$

No

Equivalent Fractions

Questions

Shade in the fraction and decide if they are equivalent.

1.



$\frac{1}{3}$



$\frac{2}{6}$

Yes No

2.



$\frac{2}{10}$



$\frac{1}{5}$

Yes No

3.



$\frac{3}{4}$



$\frac{7}{8}$

Yes No

4.



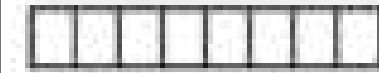
$\frac{1}{6}$



$\frac{4}{8}$

Yes No

5.



$\frac{3}{8}$



$\frac{2}{4}$

Yes No

7.



$\frac{3}{12}$



$\frac{1}{4}$

Yes No

8.



$\frac{1}{10}$



$\frac{2}{5}$

Yes No

9.



$\frac{1}{7}$



$\frac{2}{14}$

Yes No

10.



$\frac{5}{7}$



$\frac{10}{12}$

Yes No

11.



$\frac{10}{14}$



$\frac{5}{7}$

Yes No

12.



$\frac{8}{10}$



$\frac{4}{6}$

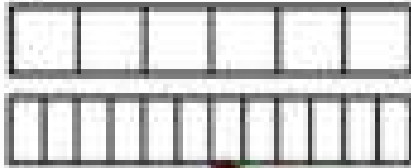
Yes No

Equivalent Fractions

Questions

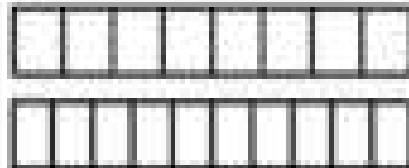
Compare the fractions using $>$, $<$, or $=$.

1.



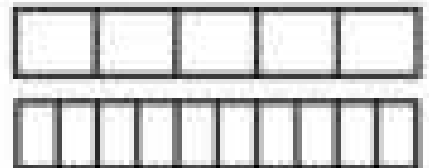
$$\frac{2}{6} \square$$

2.



$$\frac{4}{8} \square \frac{6}{10}$$

3.



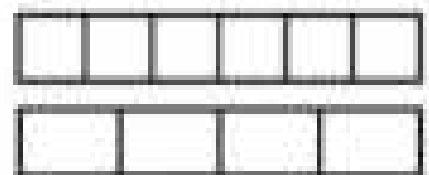
$$\frac{1}{4} \square \frac{2}{10}$$

4.



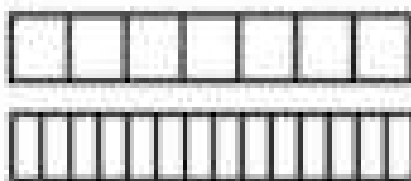
$$\frac{2}{3} \square \frac{3}{4}$$

5.



$$\frac{4}{6} \square \frac{2}{4}$$

7.



$$\frac{5}{7} \square \frac{8}{14}$$

8.



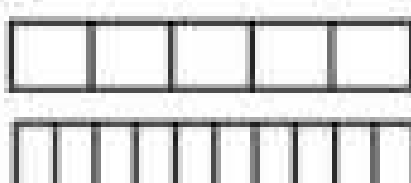
$$\frac{7}{8} \square \frac{3}{4}$$

9.



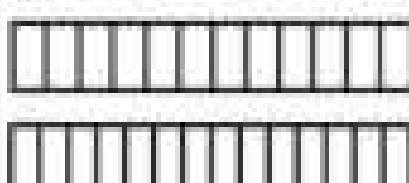
$$\frac{6}{8} \square \frac{4}{6}$$

10.



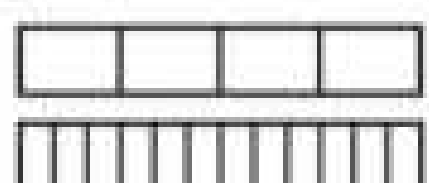
$$\frac{3}{5} \square \frac{6}{10}$$

11.



$$\frac{6}{12} \square \frac{7}{14}$$

12.



$$\frac{3}{4} \square \frac{8}{12}$$

PREVIEW

Equivalent Fractions

Questions

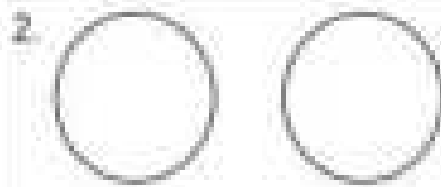
Divide the shapes into equal parts and shade in the fraction. Are they equivalent?



$$\frac{1}{4}$$

$$\frac{2}{6}$$

No



$$\frac{3}{6}$$

$$\frac{2}{3}$$

Yes

No



$$\frac{1}{4}$$

$$\frac{2}{8}$$

Yes

No



$$\frac{3}{4}$$

Yes



$$\frac{5}{8}$$

No

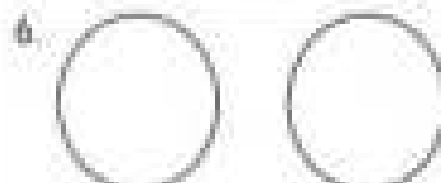


$$\frac{2}{8}$$

Yes

$$\frac{1}{4}$$

No



$$\frac{1}{3}$$

Yes

No



$$\frac{1}{4}$$

Yes

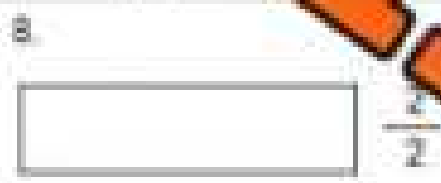
No



$$\frac{2}{6}$$

Yes

No



$$\frac{2}{2}$$

Yes

No



$$\frac{4}{4}$$

Yes

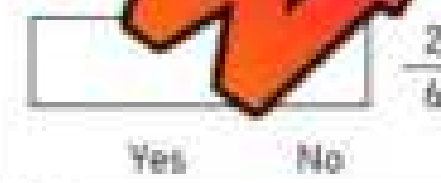
No



$$\frac{1}{1}$$

Yes

No



$$\frac{2}{6}$$

Yes

No



$$\frac{1}{2}$$

Yes

No



$$\frac{3}{6}$$

Yes

No



$$\frac{2}{5}$$

Yes

No



$$\frac{5}{10}$$

Yes

No



$$\frac{2}{3}$$

Yes

No



$$\frac{4}{6}$$

Yes

No

Equivalent Fractions

Questions

Write your own equivalent fractions.



1) $\frac{2}{3} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

2) $\frac{3}{4} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

3) $\frac{5}{7} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

4) $\frac{2}{9} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

5) $\frac{3}{8} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

6) $\frac{4}{9} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

7) $\frac{5}{5} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

8) $\frac{7}{10} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

PREVIEW

Memory Game: Matching Equivalent Fractions

Objective

What are we learning about?

Students will learn to identify and match equivalent fractions through a fun and interactive game.

Materials

What you will need for the activity:

- Memory Game cards. Each card will have a different fraction. Each fraction is matched to another fraction.
- A small table or clear floor space.



Instructions

How you will complete the activity:

1. Divide the class into groups of 3 or 4. Give each group a set of Memory Game cards. (Provided)
2. Have each group lay all the cards face down in a grid on the table.
3. The students take turns flipping over two cards at a time, trying to find a matching equivalent fraction.
4. If a student finds a match, they remove those cards from the grid and keep them.
5. If the cards do not match, they are turned back over, and the next student takes a turn.
6. The game continues until all the cards have been matched.
7. After the game, review the equivalent fractions with the class.

Cards

Memory Game Cards

$1/2$

$3/6$

$3/9$

$1/4$

$4/16$

$2/3$

$6/9$

$3/4$

$9/12$

PREVIEW

Cards

Memory Game Cards

$1/5$

$3/15$

$6/15$

$3/5$

$6/10$

$1/6$

$4/24$

$5/6$

$10/12$

PREVIEW

Cards

Memory Game Cards

3/10

9/30

14/20

9/10

8/20

2/7

6/21

3/7

9/21

PREVIEW

Comparing Fractions

Part 1Compare the fractions using $>$, $<$, or $=$.

1.

$$\frac{3}{6} \quad \square \quad \frac{4}{12}$$

2.

$$\frac{2}{8} \quad \square \quad \frac{3}{4}$$

3.

$$\frac{2}{5} \quad \square \quad \frac{3}{10}$$

4.

$$\frac{2}{6} \quad \square \quad \frac{1}{3}$$

5.

$$\frac{4}{6} \quad \square \quad \frac{1}{4}$$

6.

$$\frac{3}{5} \quad \square \quad \frac{3}{10}$$

7.

$$\frac{1}{2} \quad \square \quad \frac{1}{6}$$

8.

$$\frac{1}{3} \quad \square \quad \frac{5}{6}$$

9.

$$\frac{1}{6} \quad \square \quad \frac{1}{2}$$

10.

$$\frac{2}{4} \quad \square \quad \frac{6}{12}$$

11.

$$\frac{3}{5} \quad \square \quad \frac{1}{3}$$

12.

$$\frac{2}{3} \quad \square \quad \frac{1}{3}$$

Part 2

Answer the word problems below.

1) For Jill's birthday, she ate $\frac{3}{10}$ of her birthday cake. On Shannon's birthday, Shannon ate $\frac{1}{5}$ of her cake. If the cakes were the same size, who ate more cake?



2) Sam and Joel each got medium pizzas for themselves. Sam ate $\frac{6}{8}$ of his pizza. Joel ate $\frac{2}{4}$ of his pizza. Who ate more pizza?



Ordering Fractions

**Questions**

Put the fractions in order from least to greatest

1) $\frac{1}{3}$ $\frac{2}{3}$ $\frac{1}{9}$ $\frac{8}{9}$

2) $\frac{2}{5}$ $\frac{8}{10}$ $\frac{6}{10}$

3) $\frac{3}{4}$ $\frac{2}{3}$ $\frac{6}{12}$

4) $\frac{2}{2}$ $\frac{1}{2}$ $\frac{2}{2}$

5) $\frac{8}{8}$ $\frac{6}{8}$ $\frac{2}{4}$ $\frac{4}{4}$

6) $\frac{2}{3}$ $\frac{1}{6}$ $\frac{6}{12}$ $\frac{11}{12}$

PREVIEW

Simplifying Fractions

Fractions can be equal, which means we can write the same fraction in many different ways. The best way to write a fraction is to simplify it to its lowest form.

How To Do It:

1. Write down the factors for both numbers.

Example: the number 6 has 4 factors: 6, 1, 2, 3

2. Find the greatest common factor (GCF) by circling the largest number that fits into both numbers.

3. Divide by the GCF.

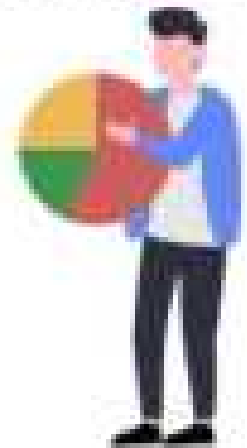
Example:

$$\frac{25}{100} = \frac{1}{4}$$

100 - Factors: 1, 2, 4, 5, 10, 20, 25, 50, 100

$$\frac{25}{100} \div 25 = \frac{1}{4}$$

$$\frac{25}{100} \div 25 = \frac{1}{4}$$



Questions

1) $\frac{8}{16} = \frac{\quad}{\quad}$

3) $\frac{12}{18} = \frac{\quad}{\quad}$

5) $\frac{36}{60} = \frac{\quad}{\quad}$

7) $\frac{14}{42} = \frac{\quad}{\quad}$

4) $\frac{25}{35} = \frac{\quad}{\quad}$

6) $\frac{21}{35} = \frac{\quad}{\quad}$

8) $\frac{16}{32} = \frac{\quad}{\quad}$

Simplifying Fractions - Matching

Questions

Draw a line from the fraction to its simplest form.




Fraction	Simplest Form
$\frac{8}{16}$	$\frac{5}{6}$
$\frac{15}{18}$	$\frac{4}{5}$
$\frac{35}{50}$	$\frac{6}{7}$
$\frac{36}{42}$	$\frac{8}{9}$
$\frac{24}{27}$	$\frac{1}{2}$
$\frac{8}{10}$	$\frac{7}{10}$

PREVIEW

Simplifying Fractions – Alex's Homework

Questions

Alex answered the questions but didn't simplify enough. Help him out!

Question	Alex's Answer	Your Answer
1) Isabella baked 30 cookies. She gave away 20 of them. What fraction of cookies did she give away? 	20/30 or 10/15	
2) Zoe went to the supermarket and bought 60 apples. She ate 15 of these apples on Friday. What fraction of the money did she spend on Friday? 	15/60 or 3/12	
3) Ethan has 18 candies. 6 are blue and 12 are green. What fraction of the candies are blue? 	6/18 or 2/3	
4) A canteen sold 64 drinks today. They sold 24 sport drinks. What fraction of drinks were sport drinks? 	24/64 or 12/32	
5) Ella scored 16 points in her basketball game. Her team scored a total of 36 points. What fraction of total points did Ella score? 	16/36 or 8/18	

PREVIEW

Converting Fractions and Decimals



Part 1

Fill in the table with the converted decimal and fraction.

Fraction	Decimal
$\frac{1}{10}$	
$\frac{2}{10}$	2
$\frac{3}{10}$	
$\frac{4}{10}$	
$\frac{5}{10}$	
$\frac{6}{10}$	
$\frac{7}{10}$	
$\frac{8}{10}$	
$\frac{9}{10}$	
$\frac{10}{10}$	
$\frac{1}{100}$	

Fraction	Decimal
$\frac{1}{10}$	0.1
	0.2
	0.3
	0.4
	0.5
	0.6
	0.7
	0.8
	0.9
	1.0

PREVIEW

Part 2

Convert the following fractions and decimals.

0.5 = $\frac{\quad}{10}$	0.1 = $\frac{\quad}{10}$	0.2 = $\frac{\quad}{10}$	0.8 = $\frac{\quad}{10}$
$\frac{6}{10}$ =	$\frac{4}{10}$ =	$\frac{3}{10}$ =	$\frac{9}{10}$ =
$\frac{37}{100}$ =	$\frac{52}{100}$ =	0.80 =	0.70 =

Fractions and Decimals

Questions

What fraction and decimal of the array is shaded in?

Fraction	
Decimal	

Fraction	
Decimal	

Fraction	
Decimal	

Fraction	
Decimal	

Fraction	
Decimal	

Fraction	
Decimal	

Fraction	
Decimal	

Fraction	
Decimal	

Fraction	
Decimal	

PREVIEW



N.6

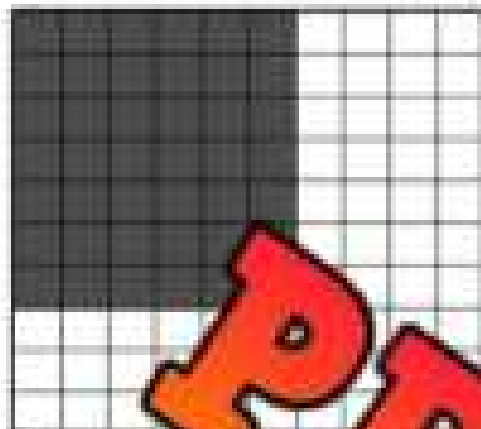
Students interpret percentages.



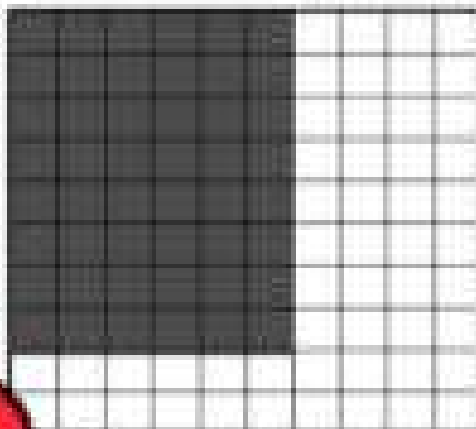
Fractions, Decimals, and Percents

Part 1

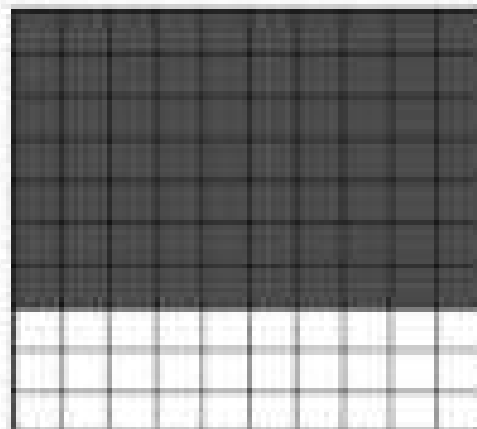
What fraction, decimal and percent of the array is shaded in?



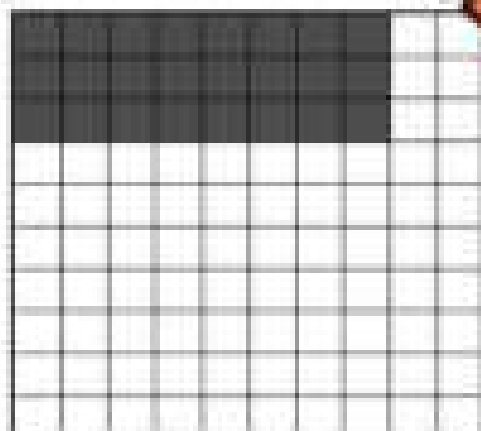
Fraction	Decimal	Percent



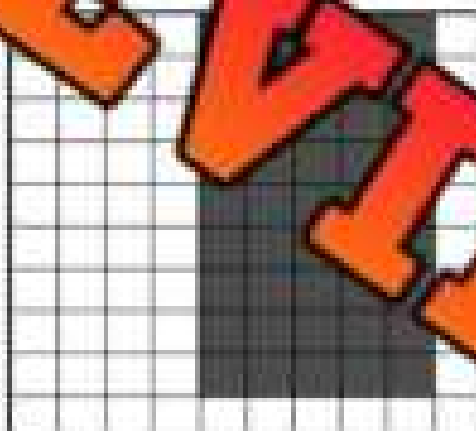
Fraction	Decimal	Percent



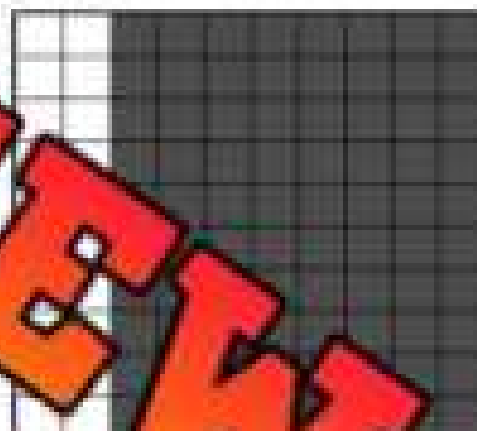
Fraction	Decimal	Percent



Fraction	Decimal	Percent



Fraction	Decimal	Percent



Fraction	Decimal	Percent

Part 2

Answer the word problems below

- Hank got 71 out of 100 on his math test. What percent did he get on his test?
- Wendy scored 23 out of 50 of her three point shots. What was her three point percentage?

Fractions, Decimals, and Percents

Part 1

Fill in the table with the converted decimal, fraction, and percent.

Fraction	Decimal	Percent
100/1000		10.0%
200/1000		20.0%
	0.300	%
400/1000		40.0%
500/1000		%
		60.0%
		%
	0.800	%
900/1000		
	1.000	

Part 2

Convert the following fractions, decimals and percent.

138/1000 =	%	536/1000 = 0.	42.4% =	/1000	798/1000 =	%
56.2% =	/1000	161/1000 =	%	871/1000 = 0.	0.938 =	%
0.356 =	%	0.682 =	%	71.4% = 0.	782/1000 = 0.	

Word Problems – Missing Percentages

Questions:

What percentage is missing?

1) In a class, 63% of students take a bus to school and 14% get a drive from their parents. What percentage of students walk to school?



2) In a survey of 7 students, 23% thought math was fun and 42% thought math was just a chore. What percentage of students disliked math?



3) A shop sells 3 types of donuts. They tracked their sales last week and found out that 38% of the donuts sold were chocolate, and 21% were vanilla. What percentage of the donuts sold were fruit-flavoured?



4) In a candy survey, respondents were asked which was their favourite. They could choose from 4 different options – gum, hard candies, lollipops, or gummies. 18% chose gum, 27% chose hard candies, and 35% chose lollipops. What percentage chose gummies?



5) The Saskatchewan Ministry of Transportation studied how many people used different types of fuel in Saskatchewan. There were 3 options – gas, diesel, or electricity. 75% used gas, 18% used diesel, and 4% used electricity. What percentage of vehicles use another type of fuel?



6) A zoo has monkeys, zebras, pandas, and snakes. Of all the animals, 23% are monkeys, 29% are zebras, and 26% are pandas. What percentage of the animals are snakes?



7) Zoe spends 3 hours on 5 social media apps each day. She spends 28% of the 3 hours on Instagram, 15% on Facebook, 22% on TikTok, and 17% on Snapchat. What percent does she spend on YouTube?



Math Basketball: Missing Percentages Challenge

Objective

What are we learning about?

To reinforce students' understanding and application of calculating missing percentages through engaging word problems and a fun basketball shooting game.



Materials

What you will need for the activity

- Small basketball (ball)
- Trash can or similar object to serve as the hoop
- Index cards with missing percentage word problems
- Marker or pen
- Timer or stopwatch

Instructions

How you will do the activity

1. Arrange the classroom so that there is enough space for multiple teams to work simultaneously. Place a desk about 6 feet from a trash can as the hoop.
2. Place a stack of index cards with problems on the desk.
3. Provide each team with a recording sheet and a pen.
4. Divide the students into teams of about five members.
5. Each team stands in a line behind their respective desk.
6. The first student in line flips over an index card and solves the problem.
7. Once the answer is recorded, the student attempts to shoot the ball into the bin.
8. If the student makes the shot, they place a tally mark on the team's tally sheet for a point. If they miss, no tally is given.
9. The student then goes to the end of the line, and the next student steps up to the desk to repeat the process.
10. The activity continues until all index cards have been solved.
11. Once all index cards are completed, the teacher collects the recording sheets and reviews the answers with the class.
12. For each incorrect answer, the team loses one point.
13. The team with the highest number of points after deductions is declared the winner.

Index Cards

Use the following table for the game.

In a school, 52% of students participate in sports and 18% are in the band. What percentage are in neither?

A survey shows that 34% of people prefer summer and 29% prefer winter. What percentage prefer spring or fall?

A garden has flowers, bushes, and trees. 40% of the plants are flowers, and 25% are bushes. What percentage are trees?

A class of 30 students has brown eyes, and 35% have blue eyes. What percentage have green eyes?

A bakery sells 100 cookies. 30% are chocolate chip, 20% are oatmeal, 20% are sugar, and 30% are peanut butter. What percentage are sugar or peanut butter?

In a fruit basket, 48% of the fruit are apples and 22% are bananas. What percentage are other fruits?

A book club has read 75 books this year. 52% of the books were fiction, and 18% were non-fiction. What percentage were biographies?

At a pet store, 30% of the animals are cats, and 50% are dogs. What percentage are other animals?

A survey about favorite ice cream flavors shows 25% prefer vanilla, 30% prefer chocolate, and 15% prefer strawberry. What percentage prefer other flavors?

A teacher has 24 students. 40% of the students have completed their homework, and 30% are working on it. What percentage have not started?

In a music class, 55% of the students play the piano, and 25% play the guitar. What percentage play other instruments?

A gym has 120 members. 45% use the treadmill, and 35% use the weights. What percentage use other equipment?

Index Cards

Use the following table for the game.

A library has 300 books. 60% of the books are fiction, and 25% are non-fiction. What percentage are reference books?

A class survey shows 38% of students walk to school, and 40% bike. What percentage use other modes of transportation?

A farm has 100 animals. 35% are cows, and 45% are chickens. What percentage are other animals?

In a pizza shop, 40% of people prefer pepperoni, and 35% prefer cheese. What percentage prefer other toppings?

A clothing store sells shirts, pants, and jackets. 50% of the items sold are shirts, and 30% are pants. What percentage are jackets?

In a school of 500 students, 20% are in grade 6, and 15% are in grade 7. What percentage are in other grades?

A movie theater sold 200 tickets. 60% were for action movies, and 25% were for comedies. What percentage were for other genres?

A restaurant's menu has appetizers, main courses, and desserts. 40% of the items are appetizers, and 30% are main courses. What percentage are desserts?

In a zoo, 55% of the animals are mammals, and 30% are birds. What percentage are reptiles or other animals?

A school library has 500 books. 45% are fiction, and 40% are non-fiction. What percentage are other types of books?

A technology store sells phones, laptops, and tablets. 50% of the items sold are phones, and 30% are laptops. What percentage are tablets?

In a science class, 40% of the students prefer biology, and 35% prefer chemistry. What percentage prefer other sciences?

Class List – Decimal, Fraction, Percent

Mrs. Hansen just finished marking a math test. Her class list with the results of the test are below. She has simplified some of the fractions, and some students wrote a different test, meaning they are out of a different total.

Grades
 A = 80% and up
 B = 70%–79%
 C = 60% – 69%
 D = 50% – 59%
 F = 49% or less

Questions

Fill in the class list



Student Name	Mark	Decimal	Percent	Grade
Madison				
Stella				
Matthew				
Eli	7/10			
John	1/2			
Kai	1/4			
Ivy	4/4			
Everly	1/5			
Bella	75/100			
Skyler	95/100			
Leah	8/10			
Roman	1/8			
Adrian	1/10			
Easton	4/5			
Savannah	77/100			

Unit Quiz – Fractions, Decimals, and Percent

Part 1

Compare the fractions using < > =

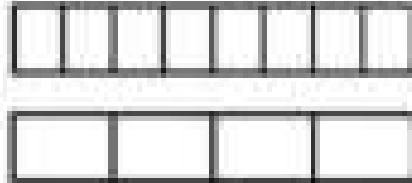
1.



$\frac{5}{7}$

< > =

2.

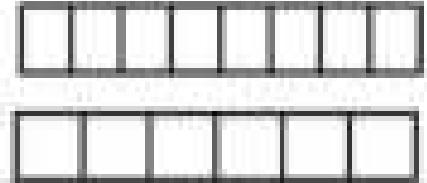


$\frac{7}{8}$

< > =

$\frac{3}{4}$

3.

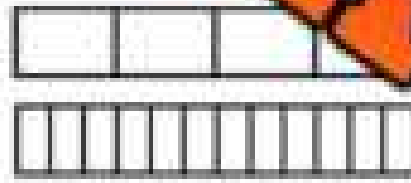


$\frac{6}{8}$

< > =

$\frac{4}{6}$

4.



$\frac{3}{4}$

< > =

$\frac{8}{12}$

5.

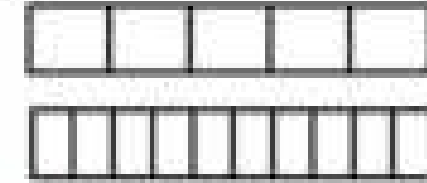


$\frac{3}{12}$

< > =

$\frac{7}{12}$

6.



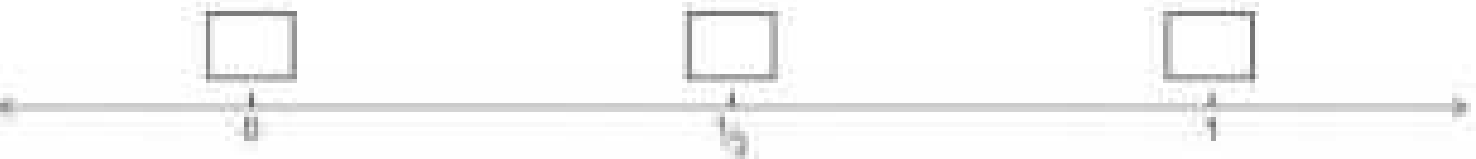
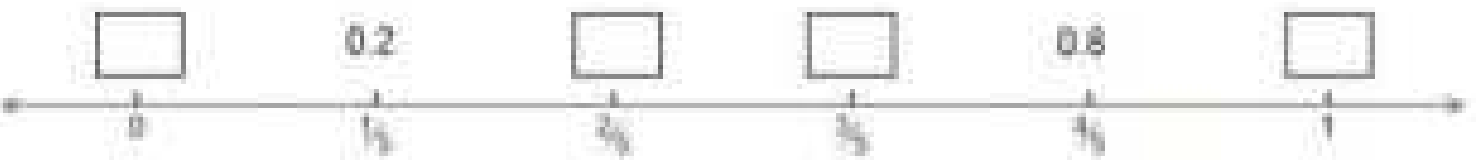
$\frac{3}{4}$

< > =

$\frac{6}{10}$

Part 2

Fill in the missing decimals on the number line.



PREVIEW

Part 3

Write 3 equivalent fractions for the following fractions.

$$\frac{1}{2}$$

$$\frac{1}{4}$$

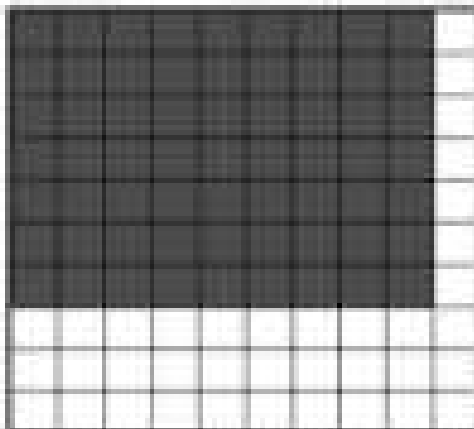
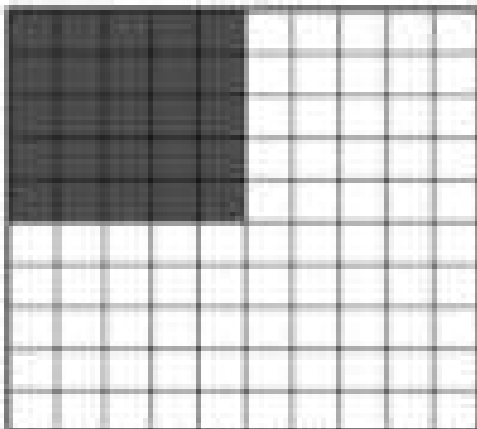
$$\frac{1}{5}$$

$$\frac{1}{6}$$

PREVIEW

Part 4

What fraction and decimal of the art is shaded in?



Fraction

Decimal

Fraction

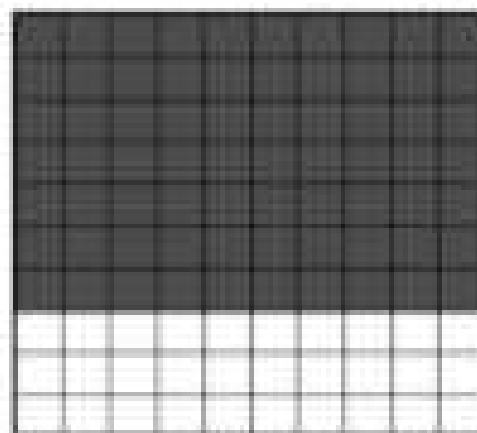
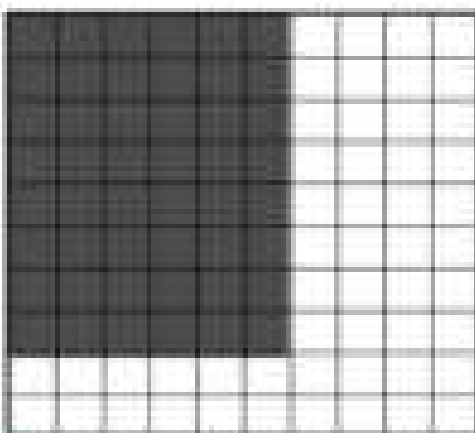
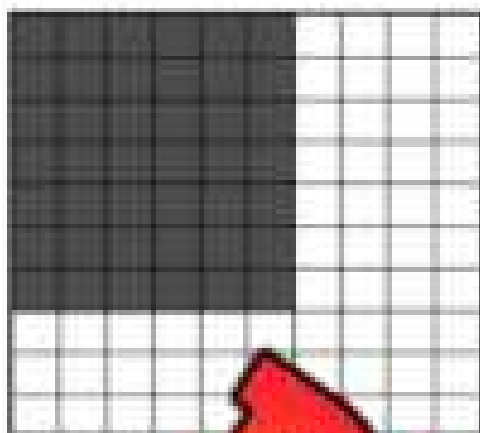
Decimal

Fraction

Decimal

Part 5

What fraction, decimal and percent of the array is shaded in?



Fraction	Decimal	Percent

Fraction	Decimal	Percent

Fraction	Decimal	Percent

Part 6

Answer the questions below.

1) The grade 6's voted for their favorite pizza. There were 5 options and students had to vote for one option. The results are listed below.

a) What percentage chose pizza?

b) If there were 100 grade 6 students surveyed, how many chose pizza?

Pizza	15%
Subs	21%
Chicken	18%
Pasta	12%
Other	34%

2) On a science test, the percentage of grade 6's who scored A, B, C, D, and F is listed below.

a) What percentage of students received an F?

b) If there were 50 students who wrote the test, how many kids got an F?

A	17%
B	38%
C	21%
D	14%
F	



Google Slides Lessons Preview



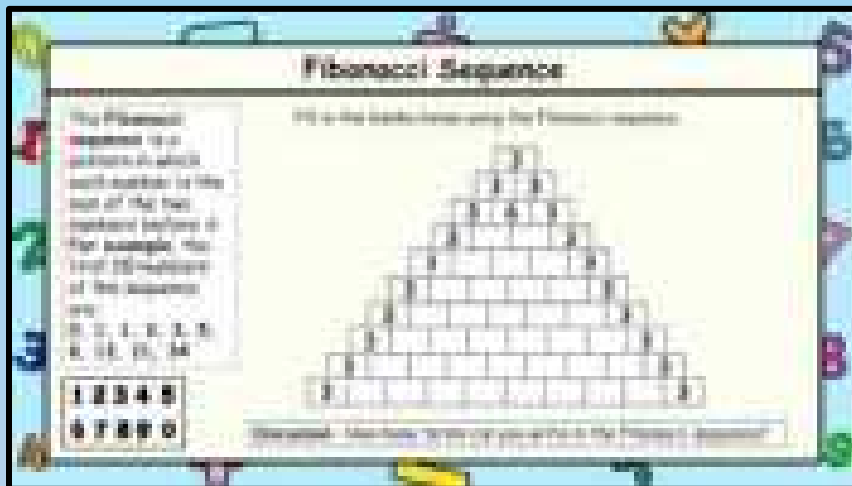


Alberta Math Curriculum Patterns & Algebra – Grade 4

3-Part Lesson Format

Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Quotes
- And More!



Part 2 – Action!

- Writing
- Matching
- Drag and Drop
- Drawing
- And More!

Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!





Alberta Math Curriculum Patterns & Algebra – Grade 4

Patterns Within Number Strings (2s)

Drag the numbers to complete the increasing patterns below.

	1	2	3	4	5	6	7	8	9	0
11	6	8	10	12						
17	33	35	37	39						
18	44	46	48	50						
19	69	71	73	75						

Patterns Within Number Strings (10s)

Drag the numbers to complete the decreasing patterns below.

	1	2	3	4	5	6	7	8	9	0
11	93	83	73	63						
12	96	86	76	66						
13	94	84	74	64						
14	98	88	78	68						

Representing Patterns

Drag the numbers to write the number of blocks in each pattern. Represent the pattern visually.

Pattern 1: A stack of 1 block, then a stack of 2 blocks, then a stack of 3 blocks, then a stack of 4 blocks.

Stack	1	2	3	4
Number of blocks	1	2	3	4

Pattern 2: A stack of 3 blocks, then a stack of 4 blocks, then a stack of 5 blocks, then a stack of 6 blocks.

Stack	1	2	3	4
Number of blocks	3	4	5	6



Alberta Math Curriculum Patterns & Algebra – Grade 4

Growing Patterns - Multiplication

Write the numbers for each pattern:

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Copy the numbers to determine the pattern rule and fill in the blank in the growing pattern:

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

1) $1 \times 1 = 1$

2) $2 \times 2 = 4$

3) $3 \times 3 = 9$

4) $4 \times 4 = 16$

5) $5 \times 5 = 25$


Patterning Word Problem

Three friends like they get dragon special treats that multiply each day.

- On Day 1, the dragon ate 1 treat.
- On Day 2, it ate 2 treats.
- On Day 3, it ate 4 treats.
- On Day 4, it ate 8 treats, and the pattern keeps going.

a) How many treats will the dragon eat on Day 7?

b) How many treats will it eat on Day 10?



Patterns and Algebra

Write the number of treats in each box.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

1) $1 \times 1 = 1$

2) $2 \times 2 = 4$

3) $3 \times 3 = 9$

4) $4 \times 4 = 16$

5) $5 \times 5 = 25$

6) $6 \times 6 = 36$

7) $7 \times 7 = 49$

8) $8 \times 8 = 64$

9) $9 \times 9 = 81$

10) $10 \times 10 = 100$



Workbook Preview



Grade 4 Patterns and Algebra

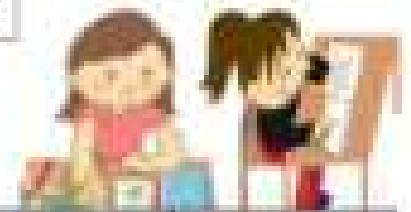
	Curriculum Expectations	Pages
P.1	<p>Students interpret and explain arithmetic and geometric sequences.</p> <ul style="list-style-type: none"> Investigate increasing sequences, including the Fibonacci sequence, in multiple representations. Create and explain increasing or decreasing sequences, including numerical sequences. Express a numerical sequence to represent a concrete or pictorial sequence. Recognize arithmetic and geometric sequences. 	5 - 70
<p>Preview of 115 pages from this product that contains 280 pages total.</p>		
A.1	<p>Students represent and apply equality in multiple ways.</p> <ul style="list-style-type: none"> Evaluate expressions according to the order of operations. Create various expressions of the same number using one or more operations. Write equations involving one operation to represent a situation. Investigate preservation of equality using a balance model. Investigate preservation of equality using an equation without an unknown value. Apply preservation of equality to determine the unknown value in an equation, limited to equations with one operation. Solve problems using equations, limited to equations with one operation. 	71 - 146
TQ	Tests and quizzes	71-73 147 - 150

Name _____

5

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Fibonacci Sequence



Directions

Fill in the missing numbers

1)	0	1	1	2		
----	---	---	---	---	--	--

2)		89	144	233		
----	--	----	-----	-----	--	--

3)	3			13		
----	---	--	--	----	--	--

4)	8	13				
----	---	----	--	--	--	--

5)	2	3	5	8		
----	---	---	---	---	--	--

6)	21	34	55	89		
----	----	----	----	----	--	--

7)	13	21	34	55		
----	----	----	----	----	--	--

8)	34	55	89	144		
----	----	----	----	-----	--	--

PREVIEW

Name: _____

7

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Hundreds Chart Patterns

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Directions

Follow the instructions below

A number pattern needs to have a rule that the pattern follows. Colour the numbers in the hundreds chart that show the pattern rule below.

Rule: start at 5, add 5 each time

Name: _____

8

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Hundreds Chart Patterns

Directions

Follow the instructions below

Colour the pattern rule: start at 2, add 12 each time

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Colour the pattern rule: start at 2, add 12 each time

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Name: _____

Common Core
1

Hundreds Chart Patterns

Directions

Create your own patterns on the hundreds chart. Write the rule

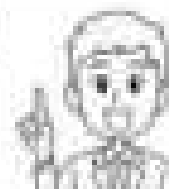
Pattern Rule:

1	2	3	4	5	6	7	8	9	10	
11		13	14	15	16	17	18	19	20	
21		23	24	25	26	27	28	29	30	
31			34	35	36	37	38	39	40	
41	42		44	45	46	47	48	49	50	
51	52				56	57	58	59	60	
61	62					67	68	69	70	
71	72	73				77	78	79	80	
81	82	83	84				88	89	90	
91	92	93	94			96	97	98	99	100

Pattern Rule:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17			20
21	22	23	24	25	26	27	28		30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Multiplication Chart - Patterns



Questions

Fill in the multiplication table below

	1	2	3	4	5	6	7	8	9	10
1			3		5		7		9	10
2				8		12		16		
3					15		18		27	30
4	4	8		16		20		24		
5		10	15							
6	6		18		30					40
7		14		28	35	42			63	
8	8	16		32			56	64		80
9			27			54			81	90
10	10	20		40			70		90	

Multiplication Chart - Patterns

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

PREVIEW

Questions

Follow the instructions below

1. Count by 4's and colour the numbers
2. Count by 5's and colour the numbers
3. Count by 8's and colour the numbers
4. Count by 10's and colour the numbers



Arithmetic Sequences - Adding

Arithmetic Sequence

An arithmetic sequence progresses through addition or subtraction.

Arithmetic Sequence

-10 -10 -10 -10 -10
 \wedge \wedge \wedge \wedge \wedge
 10, 20, 30, 40, 50, 60

+5 +5 +5 +5 +5
 \wedge \wedge \wedge \wedge \wedge
 3, 8, 13, 18, 23, 28

Part 1 Arithmetic Sequence - Addition



1) 2, 4, 6, _____

2) 6, 10, 14, _____

3) 22, 27, 32, _____

5) 73, 80, 87, _____

6) 11, _____

Part 2 Follow the rule to continue the arithmetic sequence.

1) (Add 2)

7, 9, 11, _____

2) (Add 3)

22, 25, 28, _____

3) (Add 6)

43, 49, 55, _____

4) (Add 5)

62, 67, 72, _____

5) (Add 10)

81, 91, 101, _____

6) (Add 4)

147, 151, 155, _____

Word Problems: Arithmetic Sequences - Adding

Questions

Solve the word problems below

	Word Problems - Growing Patterns - Addition	Answers
1	Mrs. Lee has a collection of flower pots. She puts 3 on her kitchen shelf on Monday, and every day after that, she adds 2 more pots. How many flower pots will be on the shelf by Saturday?	
2	Emily is building a tower with blocks. She places 4 blocks at the base and adds 3 more blocks for each new level. What will be the total number of blocks in the tower after she adds the fourth level?	
3	Josh has an album for his stickers. On Monday he pastes 2 stickers into it, and every day he pastes 3 more stickers than each day before. How many stickers will he paste on Friday?	
4	Sara collects seashells by the beach. On the first day, she finds 5 seashells. Each day, she finds 3 more seashells. How many seashells will Sara have in total by the end of the sixth day?	
5	A little puppy eats 1 cup of food every day. To help him grow, his owner decides to add an extra 1 cup of food to his daily meal every week. How much how many cups of food in total will the puppy eat in week 4?	

PREVIEW

Arithmetic Sequences - Rules



$$+4 \quad +4$$



2, 6, 10, 14, 18, 22

Pattern Rule: Start at 2, add 4 each time.

Directions

Growing Addition Patterns

29, 38, 47, 56, 65, 74, 83

Start at _____ add _____ each time

155, _____, 179, 187

Start at _____ add _____ each time

203, 210, 217, 224, _____, 238

Start at _____ add _____ each time

370, 374, 378, 382, 386, 390

Start at _____ add _____ each time

547, 553, 559, 565, 571, 577

Start at _____ add _____ each time

803, 814, 825, 836, 847, 858

Start at _____ add _____ each time

PREVIEW

Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class.

Name: _____

Growing Addition Pattern Questions

1) (Add 7)
54, 61, 68, _____2) 439, 451, _____, 475, 487, 499
Start at _____, add _____ each time.

3) _____

Pattern Rule: Start at 305, add 8
each time.

Name: _____

Growing Addition Pattern Questions

1) (Add 7)
54, 61, 68, _____2) 439, 451, 463, 475, 487, 499
Start at _____, add _____ each time.

3) _____

Pattern Rule: Start at 305, add 8
each time.

Name: _____

Growing Addition Pattern Questions

1) (Add 7)
54, 61, 68, _____2) 439, 451, 463, 475, 487, 499
Start at _____, add _____ each time.

3) _____

Pattern Rule: Start at 305, add 8
each time.

Name: _____

Growing Addition Pattern Questions

1) (Add 7)
54, 61, 68, _____2) 439, 451, 463, 475, 487, 499
Start at _____, add _____ each time.

3) _____

Pattern Rule: Start at 305, add 8
each time.

Arithmetic Sequences - Rules

Questions

Write your own sequences using the pattern rule



1) _____

Pattern Rule: Start at 203, add 10 each time

2) _____

Pattern Rule: Start at 514, add 6 each time

3) _____

Pattern Rule: Start at 661, add _____ each time

4) _____

Pattern Rule: Start at 717, add 7 each time

5) _____

Pattern Rule: Start at 971, add 5 each time

PREVIEW

Arithmetic Sequences - Rules

Part 1

Continue the growing/increasing patterns below

1) 10, 20, 30, _____

Pattern Rule: Start at 10, add _____ each time

2) 2, 5, 8, _____

Pattern Rule: Start at _____ add _____ each time

3) 35, _____, 71, _____

Pattern Rule: Start at _____ add _____ each time

4) 150, 172, 194, _____

Pattern Rule: Start at _____ add _____ each time

5) 273, 288, 303, _____

Pattern Rule: Start at _____ add _____ each time



PREVIEW

Part 2

Write your own patterns using the rules below

1) _____

Pattern Rule: Start at 41, add 5 each time

2) _____

Pattern Rule: Start at 200, add 11 each time

3) _____

Pattern Rule: Start at 321, add 6 each time

4) _____

Pattern Rule: Start at 442, add 12 each time

Arithmetic Sequences - Decimals



Questions

Arithmetic Addition Sequences - Decimals

1) 4.0, 5.0, 6.0, _____, _____, _____

Pattern Rule: _____

2) 6.3, 7.1, _____, _____, _____

Pattern Rule: _____

3) 4.5, 5.0, 5.5, _____, _____, _____

Pattern Rule: _____

4) 10.1, 11.2, 12.3, _____, _____, _____

Pattern Rule: _____

5) 17.2, 17.3, 17.4, _____, _____, _____

Pattern Rule: _____

6) 22.2, 22.4, 22.6, _____, _____, _____

Pattern Rule: _____

7) 35.3, 35.8, 36.3, _____, _____, _____

Pattern Rule: _____

8) 42.1, 42.8, 43.5, _____, _____, _____

Pattern Rule: _____

PREVIEW

Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class.

Name: _____

**Arithmetic Addition Sequences -
Decimals**

1) 7.2, 9.2, 11.2, _____, _____

2) 92.4, 92.8, 93.2, _____, _____

3) 41.6, 42.8, 44.0, _____, _____

4) 20.5, 23.0, 25.5, _____, _____

Name: _____

**Arithmetic Addition Sequences -
Decimals**

1) 7.2, 9.2, 11.2, _____, _____

2) 92.4, 92.8, 93.2, _____, _____

3) 41.6, 42.8, 44.0, _____, _____

4) 20.5, 23.0, 25.5, _____, _____

Name: _____

**Arithmetic Addition Sequences -
Decimals**

1) 7.2, 9.2, 11.2, _____, _____

2) 92.4, 92.8, 93.2, _____, _____

3) 41.6, 42.8, 44.0, _____, _____

4) 20.5, 23.0, 25.5, _____, _____

Name: _____

**Arithmetic Addition Sequences -
Decimals**

1) 7.2, 9.2, 11.2, _____, _____

2) 92.4, 92.8, 93.2, _____, _____

3) 41.6, 42.8, 44.0, _____, _____

4) 20.5, 23.0, 25.5, _____, _____

Arithmetic Sequences - Subtraction



Arithmetic Sequence - Subtracting

$$\begin{array}{cccccc} -18 & -18 & -18 & -18 & -18 & \\ \wedge & \wedge & \wedge & \wedge & \wedge & \\ 60, & 50, & 40, & 30, & 20, & 10 \end{array}$$

$$\begin{array}{ccccc} -5 & -5 & -5 & -5 & -5 \\ \wedge & \wedge & \wedge & \wedge & \wedge \\ 45, & 40, & 35, & 30, & 25, & 20 \end{array}$$



Part 1

Fill in the missing numbers in the pattern

$$1) \quad \begin{array}{ccc} \wedge & \wedge & \\ 12, & 10, & 8, \end{array} \quad \underline{\hspace{2cm}}$$

$$2) \quad \begin{array}{ccc} \wedge & \wedge & \\ 23, & 19, & 15, \end{array} \quad \underline{\hspace{2cm}}$$

$$3) \quad \begin{array}{ccc} \wedge & \wedge & \\ 144, & 137, & 130, \end{array} \quad \underline{\hspace{2cm}}$$

$$4) \quad \begin{array}{ccc} \wedge & \wedge & \\ 255, & 248, & 241, \end{array} \quad \underline{\hspace{2cm}}$$

$$5) \quad \begin{array}{ccc} \wedge & \wedge & \\ 356, & 348, & 340, \end{array} \quad \underline{\hspace{2cm}}$$

$$6) \quad \begin{array}{ccc} \wedge & \wedge & \\ 100, & 93, & 86, \end{array} \quad \underline{\hspace{2cm}}$$

Part 2

Follow the rule by subtracting the next number in the pattern

1) (Subtract 2)

$$18, 16, 14, \underline{\hspace{2cm}}$$

2) (Subtract 3)

$$30, 27, 24, \underline{\hspace{2cm}}$$

3) (Subtract 5)

$$58, 53, 48, \underline{\hspace{2cm}}$$

4) (Subtract 10)

$$202, 192, 182, \underline{\hspace{2cm}}$$

5) (Subtract 6)

$$427, 421, 415, \underline{\hspace{2cm}}$$

6) (Subtract 12)

$$675, 663, 651, \underline{\hspace{2cm}}$$

Pattern Rule - Subtraction

**Part 1**

Continue the shrinking/decreasing patterns below

1) 12, 10, 8, _____

Pattern Rule: Start at 12, subtract _____ each time

2) 22, 1 _____

Pattern Rule: Start at _____ subtract _____ each time

3) 154, 13 _____

Pattern Rule: Start at _____ subtract _____ each time

4) 284, 270, 256 _____

Pattern Rule: Start at _____ subtract _____ each time

5) 497, 491, 485, _____

Pattern Rule: Start at _____ subtract _____ each time

Part 2

Write your own patterns using the rule

1) _____

Pattern Rule: Start at 218, subtract 0 each time

2) _____

Pattern Rule: Start at 375, subtract 4 each time

3) _____

Pattern Rule: Start at 547, subtract 9 each time








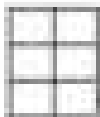
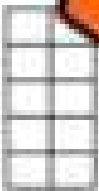

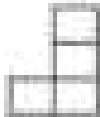
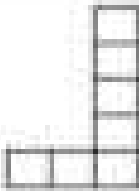


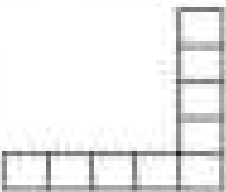
4) _____

Pattern Rule: Start at 786, subtract 13 each time

Representing Picture Sequence With Numbers

Questions

Write the numerical sequence that represents the picture sequence

<p>1)   </p> <p>Figure 1 Figure 2 Figure 3</p>	<p>Numerical Sequence</p> <p>_____</p>
<p>2)   </p> <p>Figure 1 Figure 2 Figure 3</p>	<p>Numerical Sequence</p> <p>_____</p>
<p>3)   </p> <p>Figure 1 Figure 2 Figure 3</p>	<p>Numerical Sequence</p> <p>_____</p>
<p>4)   </p> <p>Figure 1 Figure 2 Figure 3</p>	<p>Numerical Sequence</p> <p>_____</p>
<p>5)   </p> <p>Figure 1 Figure 2 Figure 3</p>	<p>Numerical Sequence</p> <p>_____</p>

PREVIEW

Representing Picture Sequence With Numbers

Questions

Write the numerical sequence that represents the picture sequence.





1)    

Figure 1 Figure 2 Figure 3 Figure 4

Numerical Sequence




2)   

Figure 1 Figure 2 Figure 3 Figure 4

Numerical Sequence



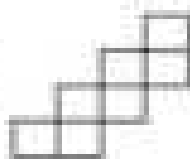
3)   

Figure 1 Figure 2 Figure 3 Figure 4

Numerical Sequence


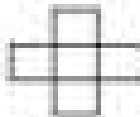
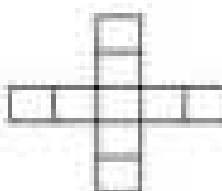
4)   

Figure 1 Figure 2 Figure 3 Figure 4

Numerical Sequence

Representing Picture Sequence With Numbers

Questions

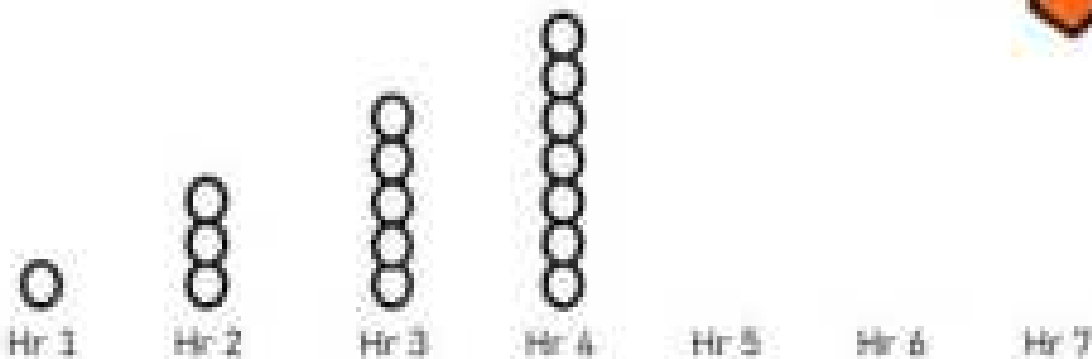
Write the numerical sequence that represents the picture sequence

1) A train has the following people in each train car.



Numerical
Sequence

2) Steven is looking for golf balls in the woods. He finds the following number of golf balls each hour:



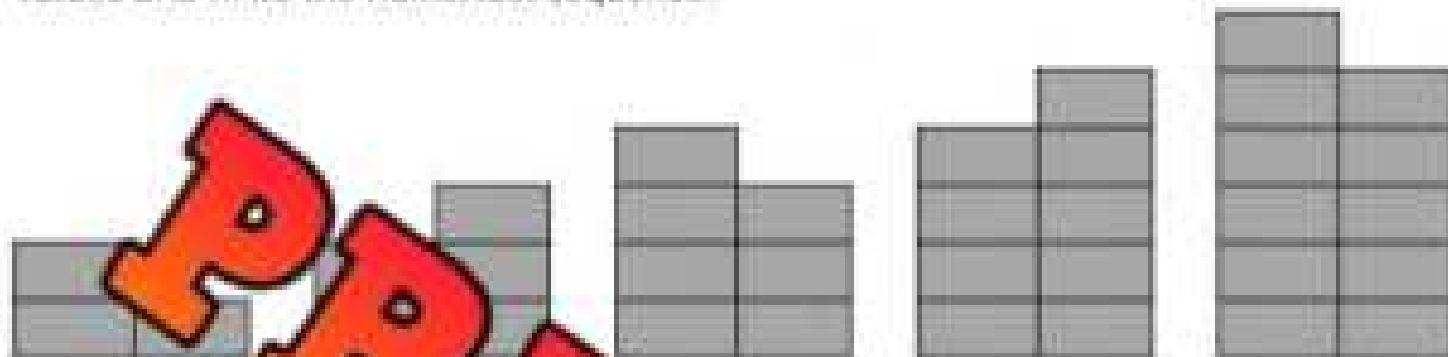
Numerical
Sequence

Representing Picture Sequence With Numbers

Questions

Fill in the table of values and write the numerical sequence

Joel has created a pattern using his blocks. Translate the pattern using the table of values and write the numerical sequence.



Numerical Sequence							
Term Number	1	2		7	8	9	10
Term Value							

Pattern Rule: _____

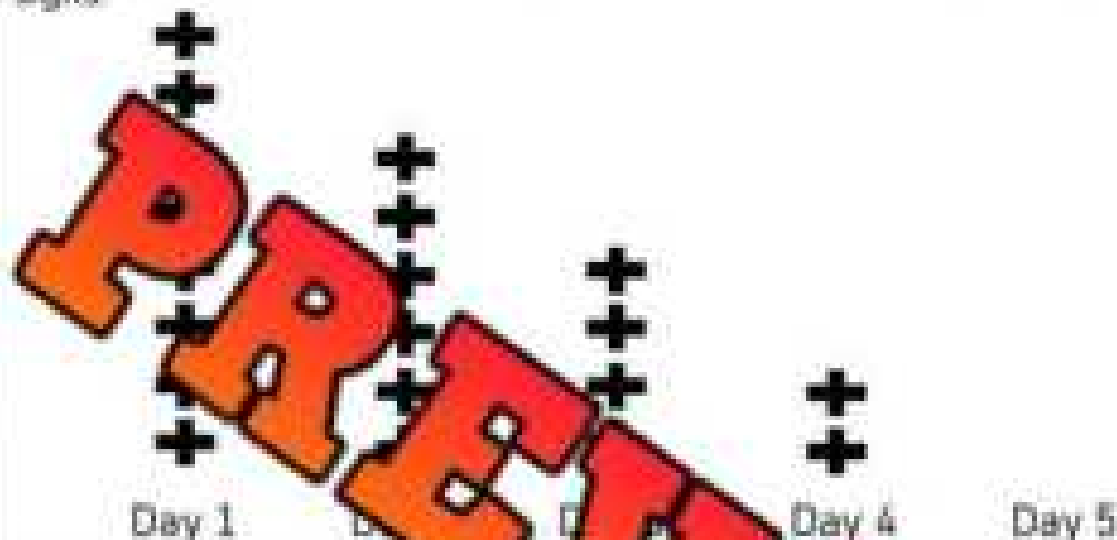
1) How many blocks would Joel use in his 10th shape if he continued his pattern?	
2) Which shape (term number) would use 27 blocks?	
3) How many blocks would it take to create the 15 th shape (term number)?	
4) How many blocks would it take to create the 32 nd shape (term number)?	

Representing Picture Sequence With Numbers

Questions

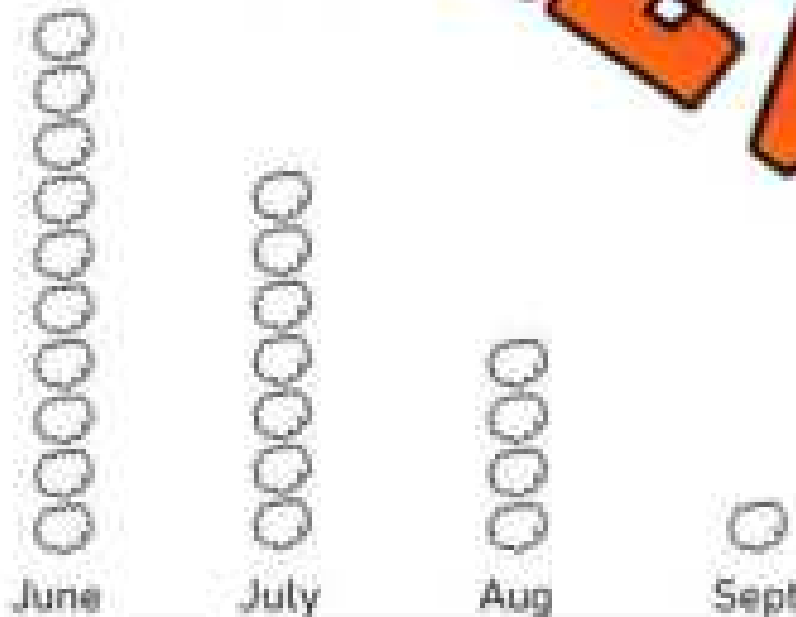
Continue the picture sequence and represent it using numbers

1) Kerry kept track of how many cookies she ate each day using addition signs.



Numerical
Sequence

2) Ally writes down how many days it rains each month from June to September.



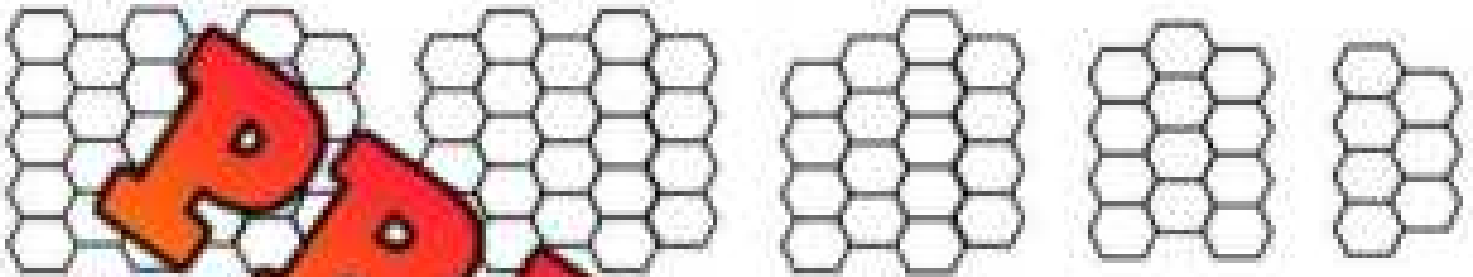
Numerical
Sequence

Representing Picture Sequence With Numbers

Questions

Fill in the table of values and write the numerical sequence

Jill makes a pattern using hexagons. Fill in the table of value and write the numerical sequence



Numerical Sequence					
--------------------	--	--	--	--	--

Term Number	1	2	3	4	5	6
Term Value						

Pattern Rule: _____

1) What is the pattern decreasing by each time?

2) Draw your own decreasing pattern below using shapes.

3) Write the numerical sequence for your decreasing pattern

Numerical Sequence					
--------------------	--	--	--	--	--

Input/Output Table - Addition

Rule: add 5

In	Out
25	30
45	50
65	70
85	90



Directions: Fill in the input/output tables below

In	Out
20	
30	
50	
120	

Rule: add 4	
In	Out
15	
47	
78	
1	

Rule: add 6	
In	Out
2	
18	
44	
92	

In	Out
71	
98	
117	
168	

Rule: add 7	
In	Out
22	
33	
54	
85	

Rule: add 12	
In	Out
15	
42	
85	
124	

Input/Output Table – Subtraction

Rule: subtract 5	
In	Out
35	30
50	45
65	60
70	65
75	70



Instructions: Complete the input/output tables below

Rule: subtract 10	
In	Out
10	0
32	22
58	48
103	93

Rule: subtract 4	
In	Out
4	0
28	24
79	75
108	104

Rule: subtract 6	
In	Out
18	12
35	29
88	82
135	129

Rule: subtract 18	
In	Out
44	26
78	60
110	92
167	149
189	171

Rule: subtract 12	
In	Out
72	60
108	96
145	133
181	169

Table of Values – Term Numbers/Values

Instructions

Fill in the table of values below



Term Number	Term Value
	12
	19
	26
5	
6	

Term Number	Term Value
1	9
2	18
3	27
4	
5	
6	

Term Number	Term Value
1	75
2	66
3	61
4	
5	
6	

Term Number	Term Value
1	98
2	92
3	
4	
5	
6	

Term Number	Term Value
1	136
2	146
3	
4	166
5	
6	
10	

Term Number	Term Value
1	180
2	175
3	
4	165
5	
6	
10	

Table of Values

Questions

Answers the questions below by using the table of values.

When you work an hour, you get paid 22 dollars.
Fill in the table to learn more about your earnings.

1) How many dollars will you make if you work 5 hours?

2) How many dollars will you make if you work 10 hours?



Hours Worked	Money Made
1	
2	
3	
4	
5	
10	

Your family is having a birthday party for your brother. You are in charge of buying the party. Each kid will get 2 pieces of candy.

Kids

Pieces of Candy

1	
2	
3	
4	
5	
10	

1) How many pieces of candy do you need to buy?

2) What if 10 kids are coming to the party? How many pieces of candy do you need to buy?

You scored 16 points in each basketball game this season. Fill in the table of values showing your game scores.



1) After your third game, how many points did you score?

2) There were 8 games this season. How many points did you score in the season?

Games	Total Points Scored
1	
2	
3	
4	
5	
8	

Push-Up Challenge

Questions

Complete the table of values and answer the questions below



Brayden was challenged by a friend to do 15 push-ups a day for 2 weeks. Complete the table of values below to see his push-up progress.

Term Number (Days)	2	3	4	5	6	7	8	9	10
Term Value (Pushups)									

Pattern Rule: _____

- 1) Which day did Brayden complete 100 pushups?
- 2) How many pushups did he complete in 10 days?
- 3) If his friend did 20 pushups for 7 days, who would have done more? Explain.
- 4) How many pushups would he do if he continued his challenge for 3 weeks?
- 5) How many days would it take him to do 375 pushups?

PREVIEW

The Egg Challenge

Challenge

Answer the question below. Show your thinking!

If a hen laid 2 eggs on Monday, 4 eggs on Tuesday, 6 eggs on Wednesday and the pattern continued, how many eggs would it lay on the Sunday?

PREVIEW



How many days would the hen need to lay 100 eggs?



Patterning Word Problem - Halloween

Questions

Follow the problem-solving steps below

- | | | |
|---|--|--|
| <input type="checkbox"/> Read the problem carefully | <input type="checkbox"/> Underline important information | <input type="checkbox"/> Draw pictures |
| <input type="checkbox"/> Create a table or chart | <input type="checkbox"/> Solve the problem | <input type="checkbox"/> Check your answer |

Ben is trick-or-treating for Halloween. He leaves his house with 13 candies to start. He gets _____ at each house he visits. He visits 10 houses.

a) Draw a patten



b) How many total candies does he get after visiting the 10 houses?



PREVIEW

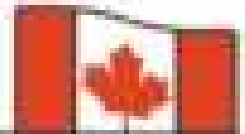
Life Expectancy Pattern

Questions

Answer the questions below



Life expectancy is the average period of time that a person may expect to live. Canada ranks 16th in the world for life expectancy at 82.66 years. Since 1950, Canadians can expect to live 14 years longer. Check out the historical life expectancy data below.



Year	1950	1960	1970	1980	1990	2000	2010	2020
Life Expectancy	70	72	74	76	78	80	82	

- a) Describe the pattern of life expectancy in Canada over the last 70 years.
- b) What do you predict the life expectancy will be in 2030?
- c) What do you predict the life expectancy will be in the year 2040?
- d) Why do you think the life expectancy rises over time?

Patterning Word Problem - Shapes

Questions

Follow the problem-solving steps below

- | | | |
|---|--|--|
| <input type="checkbox"/> Read the problem carefully | <input type="checkbox"/> Underline important information | <input type="checkbox"/> Draw pictures |
| <input type="checkbox"/> Create a table or chart | <input type="checkbox"/> Solve the problem | <input type="checkbox"/> Check your answer |

Ally created a pattern using triangles and trapezoids. She made 3 figures in her pattern.



Figure 1



Figure 3

a) How many triangles and trapezoids will there be in figure 5?

b) How many triangles and trapezoids will there be in figure 10?

Patterning Word Problem - Toothpicks

Questions

Follow the problem-solving steps below

- | | | |
|---|--|--|
| <input type="checkbox"/> Read the problem carefully | <input type="checkbox"/> Underline important information | <input type="checkbox"/> Draw pictures |
| <input type="checkbox"/> Create a table or chart | <input type="checkbox"/> Solve the problem | <input type="checkbox"/> Check your answer |

Juan uses toothpicks to make a pattern. Each line is a toothpick.



Figure 1



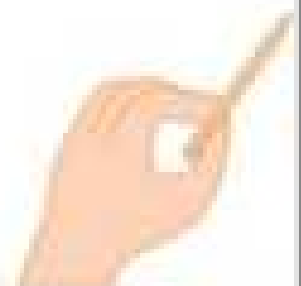
Figure 2



Figure 3

a) How many toothpicks will Juan need to make the 4th figure?

b) Juan thinks he will need 55 toothpicks to make the 10th figure. Is he right? Explain.



Geometric Sequences

Geometric Sequence

A geometric sequence progresses through multiplication.

Geometric Sequence

$\times 2$ $\times 2$ $\times 2$ $\times 2$ $\times 2$
 1, 2, 4, 8, 16, 32



Part 1 Extend the geometric sequences

1) 1, 3, 9, _____

2) 2, 4, 8, _____, _____

3) 2, 6, 18, _____, _____

4) 10, 1000, _____, _____

5) 5, 10, 20, _____, _____

6) _____, 180, _____

Part 2 Follow the rule to continue the geometric sequence

1) (Multiply by 2)

1, 2, 4, _____, _____

2) (Multiply by 5)

5, 25, 125, _____, _____

3) (Multiply by 3)

2, 6, 18, _____, _____

4) (Multiply by 10)

1, 10, 100, _____, _____

5) (Multiply by 4)

1, 4, 16, _____, _____

6) (Multiply by 2)

25, 50, 100, _____, _____

Word Problems: Growing Patterns - Multiplication**Questions**

Solve the word problems below.

	Word Problems - Growing Patterns - Multiplication	Answers
1	Emma plants 2 trees on the first day and doubles the number of trees she plants each day. How many trees will she plant on the fourth day?	
2	Noah has 10 books. Each month, he triples the number of books he has in the library. How many books will Noah have after 10 months?	
3	A puppy weighs 2 kg at birth. Its weight increases fivefold each month. How much will it weigh at the end of the third month?	
4	At the first party, Luca had 4 balloons. For each party he brought three times as many balloons as the previous party. How many balloons did he have at the sixth party?	
5	In a garden, there are 5 flowers. Each week, the number of flowers doubles. How many flowers are there at the end of the 6th week?	
6	Emma bakes 3 cookies on the first day and decides to bake four times that amount each subsequent day. How many cookies does she bake on the 4th day?	

PREVIEW

Input/Output Table - Multiplication



Rule: multiply by 2

In	Out
1	2
3	6
5	10
7	14

Question: Complete the input/output tables below

Rule: multiply by 2

In	Out
2	
5	
10	
20	

Rule: multiply by 6

In	Out
2	
4	
1	

Rule: multiply by 4

In	Out
2	
4	
6	
8	

Rule: multiply by 3

In	Out
3	
6	
9	
10	

Rule: multiply by 5

In	Out
1	
3	
5	
7	

Rule: multiply by 10

In	Out
2	
5	
8	
10	

Name _____

50

Geometry (Area)

Geometric Sequences - Rules

$\times 3$ $\times 3$ $\times 3$

\wedge \wedge \wedge

2, 6, 18, 54, 162, 486

Pattern Rule: Start at 2, multiply by 3 each time.



Question

Fill in the rules.

1, 4, 16, 64, 256, 1024

Start at _____ multiply by _____ each time

18, 54, 162, 486

Start at _____ multiply by _____ each time

1, 2, 4, 8, 16, 32, 64, 128

Start at _____ multiply by _____ each time

5, 10, 20, 40, 80, 160, 320

Start at _____ multiply by _____ each time

1, 10, 100, 1000, 10000, 100000

Start at _____ multiply by _____ each time

4, 12, 36, 108, 324, 972

Start at _____ multiply by _____ each time

PREVIEW

Geometric Sequences - Rules

Questions

Write your own sequences using the pattern rule

1) _____

Pattern Rule: Start at 2, multiply by 2 each time

2) _____

Pattern Rule: Start at 1, multiply by 3 each time

3) _____

Pattern Rule: Start at 5, multiply by 4 each time

4) _____

Pattern Rule: Start at 10, multiply by 5 each time

5) _____

Pattern Rule: Start at 3, multiply by 2 each time

PREVIEW

Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class.

Name: _____

Growing Multiplication Patterns

1) 6, 12, _____

2) 2, 6, 18, 54, _____

Start at _____ multiply by _____ each time.

3) _____

Pattern Rule: Start at 4, multiply by 2 each time.

Name: _____

Growing Multiplication Patterns

1) 6, 12, 24, _____

2) 2, 6, 18, 54, 162, 486, _____

Start at _____ multiply by _____ each time.

3) _____

Pattern Rule: Start at 4, multiply by 2 each time.

Name: _____

Growing Multiplication Patterns

1) 6, 12, 24, _____

2) 2, 6, 18, 54, 162, 486, _____

Start at _____ multiply by _____ each time.

3) _____

Pattern Rule: Start at 4, multiply by 2 each time.

Name: _____

Growing Multiplication Patterns

1) 6, 12, 24, _____

2) 2, 6, 18, 54, 162, 486, _____

Start at _____ multiply by _____ each time.

3) _____

Pattern Rule: Start at 4, multiply by 2 each time.

Patterning Word Problem – Overdue Book

Questions

Follow the problem-solving steps below

- | | | |
|---|--|--|
| <input type="checkbox"/> Read the problem carefully | <input type="checkbox"/> Underline important information | <input type="checkbox"/> Draw pictures |
| <input type="checkbox"/> Create a table or chart | <input type="checkbox"/> Solve the problem | <input type="checkbox"/> Check your answer |

Berlin checked out a book at her library. She hasn't returned it yet and is worried about how much she will have to pay. If she returns it one day late, it costs an extra 1¢. If she brings it back two days late, it costs 2¢ and on the third day late, it is 4¢. After 4 days, it will cost 8¢ and the pattern continues.

a) How much will Berlin have to pay if she brings back the book 7 days late?



b) Whoops, Berlin didn't bring back the book for 12 days! How much will she have to pay?

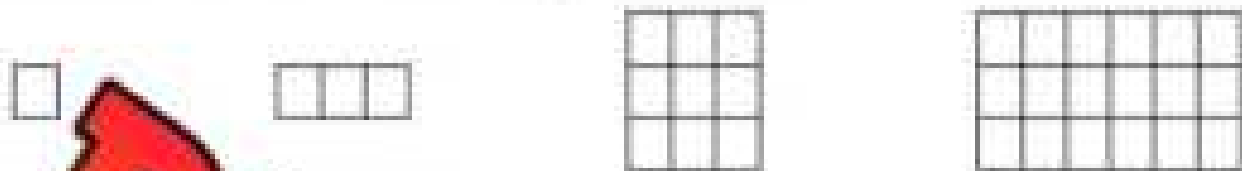
Geometric Sequences - Blocks



Questions

Answer the questions below

Rachel created the pattern below using blocks.



1) Fill in the values below

Term Num	1	2	3	4	5
Term Value (Blocks)					

2) How many blocks would she need to make the 5th step?



3) How many blocks would she need to make the 6th step?

4) Is this a geometric or arithmetic sequence? Explain how you know.

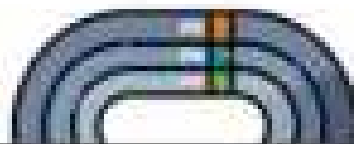
5) Write the first 6 terms in the sequence using numbers below.

Geometric Sequences – Running laps

Questions

Answer the questions below

Amber runs one lap of the track in 1 minute, two laps in 2 minutes, three laps in 4 minutes, and four laps in 8 minutes. As you can see, she slows down as she gets more tired.



1) Fill in the table of values below.

Term	1	2	3	4	5
Term Value (Minutes)					

2) If she ran 5 laps, how long would it take her to finish?



3) If she ran 10 laps, how long would it take her to finish?

4) Is this a geometric or arithmetic sequence? Explain how you know.

5) Write the 5 terms in the sequence using numbers below.

Task Cards: Patterning – All Operations

Objective

What are we learning about?

To recognize and create patterns using the four basic mathematical operations.

Materials

What you will need for the activity.

- 241
- _____ for answers
- _____

1 2 3 4 5
6 7 8 9 0

Instructions

What you will do for the activity.

1. Introduce the concept of patterns using the four basic operations and their relevance to problem-solving in everyday life.
2. Organize the students into pairs and provide each pair with their sets of task cards.
3. Give each pair an answer recording sheet to record their answers.
4. Encourage teamwork by having students collaborate and share their ideas on finding solutions.
5. Allow students to select any task card to begin with, emphasizing that they can complete the cards in any order they prefer.
6. Instruct students to record the letter of their chosen answer (A, B, or C) on their answer sheet beside the task card's number.
7. Consider using a timer to create a dynamic challenge, adjusting the duration to fit the lesson's objectives and complexity.
8. After the activity, review the answers collectively, discussing any challenging patterns and strategies used to solve them.
9. Have students reflect on the activity, sharing the methods they applied and obstacles they overcame.

Task Cards

Cut out the task cards below

Card 1:

Start with 4. Add 3 to get the next number in the pattern. What is the fifth number?

- a) 13
- b) 16
- c) 19

Card 5:

Start with 7. Subtract 1 and then multiply by 2 for the next number. What is the third number?

- a) 22
- b) 24
- c) 26

Card 6:

Start with 9. Multiply by 3 and then subtract 2 for the next number. What is the second number?

- a) 25
- b) 27
- c) 29

Card 3:

Start with 5. Multiply by 2 to get the next number. What is the fourth number?

- a) 30
- b) 40
- c) 50

Card 7:

Start with 30. Take away half for the next number. What is the third number?

- a) 15
- b) 10
- c) 15

Card 4:

Start with 48. Divide by 2 to get the next number. What is the fourth number?

- a) 12
- b) 24
- c) 6

Card 8:

Start with 8. Double the number and add 4 to get the next number. What is the third number?

- a) 36
- b) 48
- c) 44

PREVIEW

Task Cards

Cut out the task cards below

Card 9:

Begin with 10. Add 10 to get the next number. What is the ninth number?

- a) 80
- b) 90
- c) 10

Card 11:

Start with 3. Multiply by 4 and then add 3 for the next number. What is the second number?

- a) 15
- b) 24
- c) 12

Card 14:

Start with 25. Divide by 5 and then add 6 for the next number. What is the second number?

- a) 11
- b) 5
- c) 16

Card 11:

Start with 16. Add 4, then multiply by 2 for the next number. What is the third number?

- a) 40
- b) 80
- c) 88

- a) 25
- b) 20
- c) 30

Card 12:

Start with 12. Subtract 2 and then take away half for the next number. What is the second number?

- a) 4
- b) 5
- c) 10

Card 16:

Start with 2. Add 0.5 repeatedly to get the next numbers. What is the fifth number?

- a) 3.5
- b) 4
- c) 4.5

PREVIEW

Task Cards

Cut out the task cards below

Card 17:

Start with 6. Subtract 0.6 repeatedly to get the next numbers. What is the fourth number?

- a) 3.8
- b) 4.2
- c) 4.8

Card 21:

Start with 5. Add 4, multiply by 2, then add 4 repeatedly. What is the second number?

- a) 22
- b) 18
- c) 13

Card 22:

Start with 18. Subtract 2, divide by 2, then subtract 2 repeatedly. What is the third number?

- a) 6
- b) 7
- c) 0

Card 19:

Start with 10. Add 2, subtract 1, then add 2 repeatedly. What is the fourth number?

- a) 13
- b) 16
- c) 19

Card 23:

Begin with 10. Subtract 1, then add 10 repeatedly. What is the fourth number?

- a) 10
- b) 10
- c) 82

Card 20:

Start with 30. Subtract 3, add 2, subtract 3 repeatedly. What is the third number?

- a) 26
- b) 22
- c) 31

Card 24:

Start with 14. Add 1, multiply by 2, then add 1 repeatedly. What is the third number?

- a) 65
- b) 31
- c) 64

PREVIEW

Task Cards: Patterning**Answers**

Record your answers below

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	

PREVIEW

Name: _____

71

Continuum (Answer Key)

Algebra Quiz - Patterning

Part 1

Continue the Fibonacci sequences below

1)	0	1	1	2		
----	---	---	---	---	--	--

2)			9	8		
----	--	--	---	---	--	--

3)	13			55		
----	----	--	--	----	--	--

Part 2

Follow the rules and extend the patterns

1) (Add 5)

13, 18, 23, _____

2) (Add 10)

23, 33, 43, _____

3) (Subtract 6)

57, 51, 45, _____

4) (Subtract 12)

82, 70, 58, _____

5) (Add 10)

183, 193, 203, _____

6) (Subtract 11)

575, 564, 553, _____

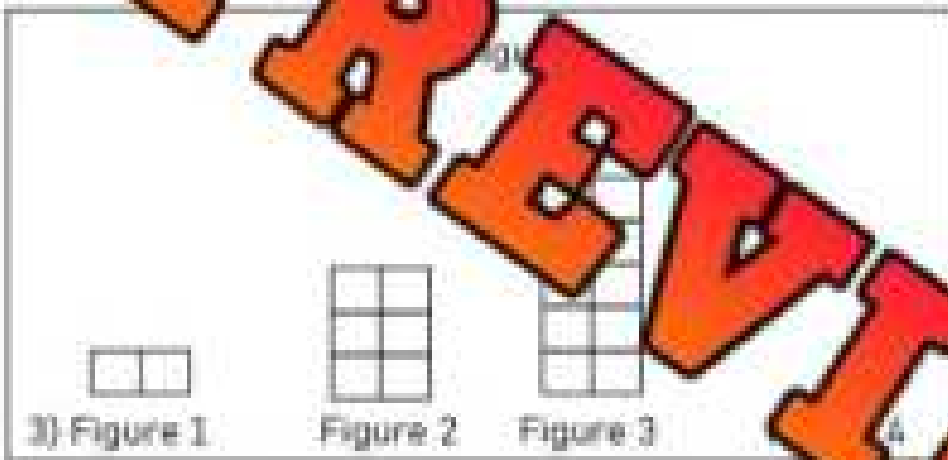
Questions

T-Tables

Term Number	Term Value
1	4
2	8
3	12

Term Number	Term Value
1	89
2	79
3	69
4	
5	
6	

PREVIEW



Numerical Sequence

Word Problem

Solve the word problem below.

If you read 2 books on Monday, 4 books on Tuesday, 6 books on Wednesday, how many books would you read on Sunday if the pattern continued?

How many days would it take you to read 132 books?

Part 5 Extend the geometric sequences

1) 1, 3, 9, _____, _____	2) 2, 4, 8, _____, _____
3) 2, 6, 18, _____, _____	4) 10, 100, 1000, _____, _____

Part 6 Write your own sequences using the pattern rule

1) _____ Pattern Rule: _____, multiply by 2 each time
2) _____ Pattern Rule: _____, multiply by 3 each time

Part 7 Answer the questions

Harper made a deal with her parents about her allowance. She got 1 penny on day one, 2 pennies on day 2, 4 pennies on day 3, and 8 pennies on day 4.

a) Fill in the table of values showing the pattern

Days	1	2	3	4	5
Pennies					

b) How many pennies will she get on day 10?



c) Is this a geometric or arithmetic pattern? How do you know?

PREVIEW



Grade 4 Algebra



	Curriculum Expectations	Pages
A.1	<p>Students represent and apply equality in multiple ways.</p> <ul style="list-style-type: none">▪ Evaluate expressions according to the order of operations.▪ Create various expressions of the same number using one or more operations.▪ Write equations involving one operation to represent a situation.▪ Investigate preservation of equality using a balance model.▪ Investigate preservation of equality using an equation without an unknown value.▪ Apply preservation of equality to determine the unknown value in an equation, limited to equations with one operation.▪ Solve problems using equations, limited to equations with one operation.	75 - 146
TQ	<ul style="list-style-type: none">▪ Tests and quizzes	147-150



Equation or Expression?

An **equation** is a mathematical sentence which states that one or more quantities are equal. Equations have an equal sign with values on both sides to show they are equal. An **expression** is a mathematical sentence that does not have an equal sign.

Equation = $3 + n = 21$

Expression = $3y + 2$

Question	Is the number sentence an expression or equation?	
1) $12 + 4 = 16$	Expression	Equation
2) $25 + y$	Expression	Equation
3) $3y + 8$	Expression	Equation
4) $2n + 5$	Expression	Equation
5) $8 - 4 + n = 10$	Expression	Equation
6) $5 + n$	Expression	Equation
7) $12 + 4 = 3$	Expression	Equation
8) $5 + n$	Expression	Equation
9) $100 + n + 3$	Expression	Equation
10) $\frac{25}{n} + 10 = 15$	Expression	Equation
11) $\frac{40}{n} - 8$	Expression	Equation
12) $65 + 3 = n + 10$	Expression	Equation

Equation or Expression?



Questions

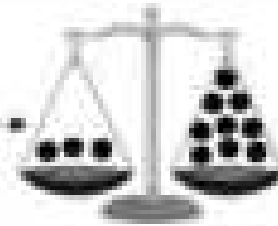
Is the number sentence an expression or equation?

<p>1) Paul has 5 cookies but needs enough for 10 people.</p> $5 + c = 10$	Equation	Expression
<p>2) The park has the following rule:</p> $3n - 1$	Equation	Expression
<p>3) Maria wants to run 72 km this week. She has already run 22 km.</p> $72 - 22 = m$	Equation	Expression
<p>4) The cost to enter an amusement park is \$20 per ticket.</p> $20t \text{ or } (t \times 20)$	Equation	Expression
<p>5) Jeff works at a garden centre and earns \$15 per hour. He can figure out his pay by using the following equation.</p> $15h \text{ or } (h \times 15)$	Equation	Expression
<p>6) Bailey made \$200 last week working with her mom. She worked 10 hours.</p> $10w = 200$	Equation	Expression
<p>7) Jane had 150 candies to give away on Halloween. She has 30 left.</p> $150 - c = 30$	Equation	Expression
<p>8) Ashley had 200 candies to give away on Halloween. She will give 2 candies to each kid. How many kids can she give candy to?</p> $200 \div 2 = k$	Equation	Expression
<p>9) Candy bags come in 30 packs. The total number of candies is represented below.</p> $30b$	Equation	Expression

Pre-Algebra – Balancing Addition Equations

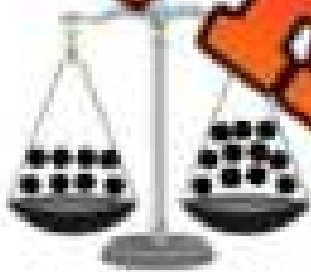
Balance the scales by putting the same amount of circles on each scale

Answer: Add 6 circles to the scale to make them equal.



3	+	6	=	9
---	---	---	---	---

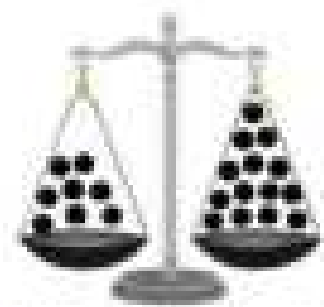
Question: How many balls do you need to add to add to balance the scales?



8	+		=	11
---	---	--	---	----



6	+		=	9
---	---	--	---	---



5	+		=	14
---	---	--	---	----



5	+		=	9
---	---	--	---	---



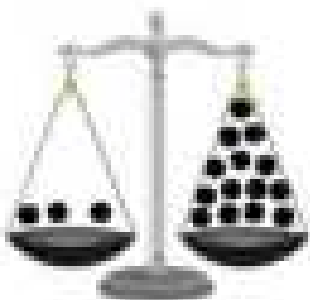
7	+		=	12
---	---	--	---	----



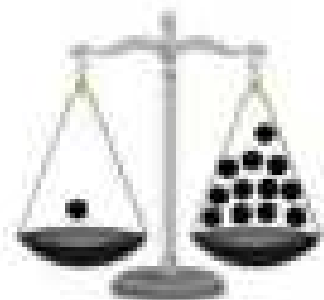
2	+		=	13
---	---	--	---	----



6	+		=	10
---	---	--	---	----



3	+		=	14
---	---	--	---	----



1	+		=	12
---	---	--	---	----

Pre-Algebra – Balancing Addition Equations

Balancing equations means both sides of the equal sign must be the same.

$$\begin{array}{c} 10 \\ \swarrow \quad \searrow \\ 3 + 7 = \boxed{10} \end{array}$$

Examples:

$$\begin{array}{c} 30 \\ \swarrow \quad \searrow \\ 24 + 6 = \boxed{30} \end{array}$$

Questions

Fill in the missing number to balance the equation

1) $10 + \square = 20$

2) $23 + 6 = \square$

3) $34 + 5 = \square$

4) $12 + \square = 20$

5) $\square + 28 = 40$

6) $26 + \square = 40$

7) $\square + 6 = 28$

8) $\square + 17 = 37$

9) $\square + 33 = 50$

10) $35 + 13 = \square$

11) $22 + \square = 32$

12) $\square + 15 = 40$

13) $24 + \square = 31$

14) $26 + 12 = \square$

15) $40 + \square = 50$

16) $26 + \square = 42$

17) $35 + 15 = \square$

18) $13 + \square = 25$

19) $44 + \square = 52$

20) $18 + 22 = \square$

21) $41 + \square = 50$

Word Problems: Balancing Addition Equations**Questions**

Solve the word problems below

	Word Problems - Balancing Addition Equations	Answers
1	An aquarium has x fish. After 2 new fish are added, there are 9 fish swimming in the tank. What was the original number of fish?	
2	Thomas has x beads on his necklace. He adds 5 more beads and now has 10 beads. How many beads were on Thomas's necklace?	
3	Oliver has x pencils in his case. He adds 3 pencils from his friend, and now he has 10 pencils. How many pencils were in Oliver's case to begin with?	
4	Clara bakes x cookies, then bakes 7 more. She has 15 cookies total. How many cookies did Clara bake first?	
5	Sam has a bag with x marbles. He finds 4 more marbles, and now he has 13 marbles altogether. How many marbles were in the bag initially?	
6	Leah has x stickers. Her friend gives her 7 stickers, and now Leah has 20 stickers. How many stickers did Leah start with?	

Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class.

Name: _____

1. Put a slash through the equal sign (\neq) if it is not balanced.

- 1) $16 + 13 = 27$
- 2) $47 + 16 = 63$

2. Fill in the missing number to balance the equation.

- 1) $28 + 7 = \square$
- 2) $\square + 19 = 76$

Name: _____

1. Put a slash through the equal sign (\neq) if it is not balanced.

- 1) $16 + 13 = 27$
- 2) $47 + 16 = 63$

2. Fill in the missing number to balance the equation.

- 1) $28 + 7 = \square$
- 2) $\square + 19 = 76$

Name: _____

1. Put a slash through the equal sign (\neq) if it is not balanced.

- 1) $16 + 13 = 27$
- 2) $47 + 16 = 63$

2. Fill in the missing number to balance the equation.

- 1) $28 + 7 = \square$
- 2) $\square + 19 = 76$

Name: _____

1. Put a slash through the equal sign (\neq) if it is not balanced.

- 1) $16 + 13 = 27$
- 2) $47 + 16 = 63$

2. Fill in the missing number to balance the equation.

- 1) $28 + 7 = \square$
- 2) $\square + 19 = 76$

Addition – Which Equation Matches?

Two of the equations equal the same number. Which one matches the shaded in equation

Example

$12 + 11$

$14 + 9$

$19 + 5$



Question

Circle the equation that matches the shaded in equation

1)

$17 + 4$

$22 + 4$

$13 + 12$

2)

$16 + 12$

$15 + 14$

3)

$21 + 8$

$17 + 11$

$17 + 12$

4)

$25 + 10$

$15 + 15$

5)

$31 + 11$

$35 + 7$

$22 + 22$

6)

$35 + 12$

$40 + 6$

$25 + 22$

7)

$41 + 23$

$30 + 32$

$32 + 32$

Addition – Using Symbols

When we do not know the value of an addend in a question, we can use any symbol to replace the unknown.



Part 1

Find out the value of the symbol

1)

$$40 + \triangle = 70$$

$$\triangle + 20 = 50$$

$$\triangle =$$

2)

$$33 + \circ = 58$$

$$\circ =$$

3)

$$\bullet + 61 = 97$$

$$\bullet =$$

4)

$$47 + \blacklozenge = 82$$

$$\blacklozenge + 30 = 76$$

$$\blacklozenge =$$

6)

$$72 + \bullet = 105$$

$$\bullet =$$

7)

$$\blacklozenge + 105 = 150$$

$$\blacklozenge =$$

8)

$$140 + \blacklozenge = 172 + 181$$

$$\blacklozenge =$$

Part 2

Write your own questions using any symbol you want. Then get a friend to answer.

1)

2)

Addition – Find the Variable

A **variable** is a letter that represents an unknown number. When we don't know a number, we can use a letter to take the place of the unknown number.

Example: $8 + n = 15$



We can figure out the unknown number by balancing the equation. In this equation, $n = 7$.

Question Find out the value of the variable

$n + 8 = 15$ $n =$	$n + 5 = 12$ $n =$	$22 + n = 30$ $n =$
$18 + 12 = p$ $p =$		$p + 13 = 30$ $p =$
$15 + y = 30$ $y =$	$y + 14 = 28$ $y =$	$35 = y$ $y =$
$38 + t = 45$ $t =$	$14 + t = 33$ $t =$	$22 + t = 30$ $t =$
$14 + a = 22$ $a =$	$35 + a = 50$ $a =$	$50 + a = 50$ $a =$
$12 + 16 = s$ $s =$	$21 + s = 43$ $s =$	$33 + s = 46$ $s =$

Activity – Mystery Number Challenge

Objective

What are we learning about?

To help students understand how to use symbols to represent unknown values in equations, enhancing their problem-solving skills by writing equations that correspond to given problems.

$$x + 10 = 25$$

Material

What you will need for the activity

- Small white sheets of paper
- Dry erase marker or pencil
- Set of simple word problems on cards
- Tokens or stickers

Instructions

How you will complete

1. Distribute a sheet of paper and a pencil to each student.
2. Hand out a card with a simple word problem to each student. Each problem should involve a basic arithmetic operation and include a blank space for an unknown value, like "Sam has some apples. He has 10 more than what he has. How many did he start with?"
3. Ask the students to read their problem and think about what the unknown value is.
4. Instruct the students to write an equation on their paper using a symbol (like x or a blank line) to represent the unknown value.
5. Once they have written their equation, students should come up to the front of the class one by one to present their equation and explain their thinking process in determining how to set up their equation.
6. Give feedback on each equation, discussing as a class whether the equation makes sense and if it accurately represents the word problem.
7. Award tokens or stickers for correctly written equations and good explanations.

Word Problems

Cut out the questions below and distribute to each student.

Lucy has some stickers. She gets 7 more from her friend, and now she has 10 stickers. How many stickers did Lucy start with?

Josh had some books. He bought 6 more books at the book fair, and now he has 11 books. How many books did Josh have originally?

Mia had some crayons. She found 8 more in her desk drawer, and now she has 15 crayons. How many crayons did Mia have to begin with?

Aidan has some toy cars. His aunt gave him 9 more cars for his birthday, and now he has 20 cars. How many cars did Aidan have before his birthday?

Ella had some pieces of wood. She found 3 more to share with her brother, and now they have 12 pieces of wood together. How many pieces did Ella have initially?

Noah had some balloons. 4 more balloons were blown up for him at the party, and now he has 10 balloons. How many balloons did Noah have to begin with?

Sophia had some pencils. She won 5 more pencils at a game, and now she has 18 pencils. How many pencils did Sophia have at first?

Liam had some cookies. He made 8 more cookies when he got home, and now he has 14 cookies. How many cookies did Liam have before baking?

Olivia had some marbles. She traded 2 more marbles with her friend, and now she has 9 marbles. How many marbles did Olivia have originally?

Ben had some action figures. He received 6 more action figures as gifts, and now he has 17 action figures. How many action figures did Ben start with?

Amelia had some beads. She bought 10 more beads for her craft project, and now she has 25 beads. How many beads did Amelia have to begin with?

James had some puzzle pieces. He found 7 more pieces under the couch, and now he has 12 pieces. How many puzzle pieces did James have initially?

Using Variables to Solve Addition Equations

There are some instances where we know the values of variables and need to plug them into an equation. For example:

$$a + b + c = 7$$

$$5 + 3 + 7 = 15$$

$a = 5$

$b = 3$

$c = 7$



Question Find out the value of the variable

$a + \underline{\quad} + \underline{\quad} = 8$

$c = 6$

$n + y + t = \underline{\quad}$

$n = 8$

$y = 10$

$t = 5$

$c + r + p = \underline{\quad}$

$c = 4$

$r = 4$

$h + k = \underline{\quad}$

$g = 8$

$h = 4$

$k = 2$

$e + c + g = \underline{\quad}$

$e = 3$

$c = 7$

$g = 10$

$n + b = \underline{\quad}$

$b = 8$

$c = 3$

$a + b + c = \underline{\quad}$

$a = 15$

$b = 12$

$c = 12$

$n + y + t = \underline{\quad}$

$n = 5$

$y = 10$

$t = 5$

$c + r + p = \underline{\quad}$

$c = 14$

$r = 8$

$p = 10$

$g + h + k = \underline{\quad}$

$g = 18$

$h = 12$

$k = 10$

$e + c + g = \underline{\quad}$

$e = 16$

$c = 15$

$g = 11$

$a + b + c = \underline{\quad}$

$a = 25$

$b = 15$

$c = 10$

Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class

Name: _____

Solve these addition equations using the variables.

1) $n + y + t =$ $n = 6$ $y = 19$ $t = 5$

_____ + _____ + _____ = _____

2) $g + h + k =$ $g = 8$ $h = 13$ $k = 11$

_____ + _____ + _____ = _____

3) $a + b + c =$ $a = 12$ $b = 18$ $c = 16$

_____ + _____ + _____ = _____

Name: _____

Solve these addition equations using the variables.

1) $n + y + t =$ $n = 6$ $y = 19$ $t = 5$

_____ + _____ + _____ = _____

2) $g + h + k =$ $g = 8$ $h = 13$ $k = 11$

_____ + _____ + _____ = _____

3) $a + b + c =$ $a = 12$ $b = 18$ $c = 16$

_____ + _____ + _____ = _____

Name: _____

Solve these addition equations using the variables.

1) $n + y + t =$ $n = 6$ $y = 19$ $t = 5$

_____ + _____ + _____ = _____

2) $g + h + k =$ $g = 8$ $h = 13$ $k = 11$

_____ + _____ + _____ = _____

3) $a + b + c =$ $a = 12$ $b = 18$ $c = 16$

_____ + _____ + _____ = _____

Name: _____

Solve these addition equations using the variables.

1) $n + y + t =$ $n = 6$ $y = 19$ $t = 5$

_____ + _____ + _____ = _____

2) $g + h + k =$ $g = 8$ $h = 13$ $k = 11$

_____ + _____ + _____ = _____

3) $a + b + c =$ $a = 12$ $b = 18$ $c = 16$

_____ + _____ + _____ = _____

Part Part Whole – Numbers to 20**Questions**

How do the parts below equal the whole at the top

1)

11	

2)

14	
	8

3)

4)

6	5

5)

12	
7	

6)

17	

7)

10	5

8)

18	
12	

9)

14	
8	

10)

12	8

PREVIEW

Part Part Whole – Numbers to 1000

Questions

How do the parts below equal the whole at the top

1)

320	
105	

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

2)

475	
	60

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

3)

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

4)

250	250

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

5)

445	
395	

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

6)

625	

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

7)

750	125

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

8)

715	
685	

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

9)

840	
125	

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

10)

445	405

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

PREVIEW

Part Part Part Whole – Numbers to 100

Questions

How do the parts below equal the whole at the top

1)

18		
6	6	

$$6 + 6 = 18$$

2)

25		
	10	8

$$\underline{\quad} + 10 + 8 = 25$$

3)

7		

$$7 + \underline{\quad} + 15 = \underline{\quad}$$

4)

13	15	8

$$13 + 15 + 8 = \underline{\quad}$$

5)

57		
11	18	

$$11 + 18 + \underline{\quad} = 57$$

6)

2		17

$$2 + \underline{\quad} + 17 = \underline{\quad}$$

7)

23	18	25

$$23 + 18 + 25 = \underline{\quad}$$

8)

35		24

$$35 + \underline{\quad} + 24 = 78$$

9)

86		
61		15

$$61 + \underline{\quad} + 15 = 86$$

10)

99		
22		44

$$22 + \underline{\quad} + 44 = 99$$

PREVIEW

Word Problems – Writing Addition Equations

Questions

Answer the questions below

1) Steve and James love video games. Steve has 8 games. Steve and James have 18 games in total. Which equation will tell us how many games James has?

$j + 8 = 18$	$8 + 18 = j$
$8 + j = 18$	$8 - j = 18$



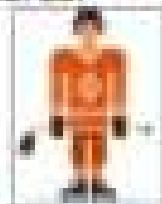
2) Jen and Rebecca are baking cookies. Rebecca made 20 cookies. They made 50 total cookies. Which equation will tell us how many cookies Jen made?

$c + 20 = 50$	$50 + c = 20$
$c - 20 = 50$	



3) Scott and Luke love hockey cards. Scott has 25 cards and Luke has 50 cards. Which equation will tell us how many cards they have?

$c + 25 = 50$	$25 + 50 = c$
$25 + c = 50$	$50 + c = 25$



4) Adam and Henry went Trick or Treating. Henry got 62 candies. They got 121 candies in total? Which equation will tell us how many candies Adam got?

$62 + c = 121$	$62 + 121 = c$
$c + 62 = 121$	$62 - c = 121$



5) Sam scored 15 points in his basketball game. He had 5 points in the first half. Which equation will tell us how many points he had in the second half?

$p + 5 = 15$	$5 + 15 = p$
$5 - p = 15$	$5 + p = 15$



Word Problems – Writing Addition Equations

Questions

Answer the questions below – Write the addition equation sentences.

1) Tim drove 31km to get to work. Then he drove to the store. When he got to the store, he had driven 58 km in total. How many km did he drive to the store?



2) Steve got 25 points in level 1 of a video game. He got 33 more points for beating level 2. How many points did he have after level 2?



Bonus – He had 78 total points after beating level 2. How many points did he get in level 3?

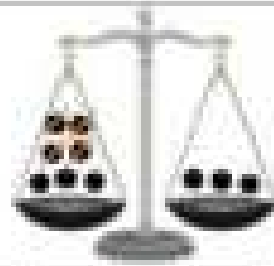
3) In badminton, Jessica and Erin won their game. They scored 21 points and their opponents only scored 16. Jessica scored 13 of the 21 points. How many points did Erin score?



Pre-Algebra – Balancing Subtraction Equations

Balance the scales by taking away circles from the scale.

Answer: take 4 circles from the scale to make them equal.



7	-	4	=	3
---	---	---	---	---

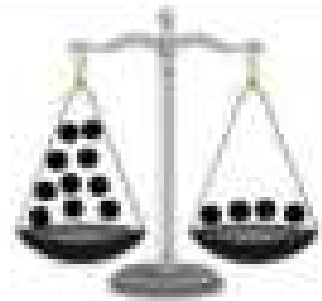
Question: How many balls do you need to take away to balance the scales?



11	-		=	6
----	---	--	---	---



8	-		=	
---	---	--	---	--



10	-		=	4
----	---	--	---	---



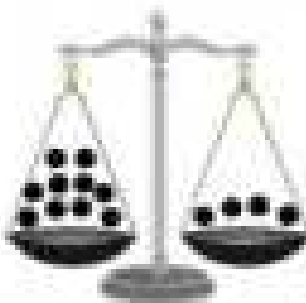
8	-		=	1
---	---	--	---	---



11	-		=	3
----	---	--	---	---



13	-		=	2
----	---	--	---	---



10	-		=	4
----	---	--	---	---



14	-		=	1
----	---	--	---	---



4	-		=	0
---	---	--	---	---

Subtraction – Are They Equal?

Are the equations equal? Put a slash through the equal sign for any equations that are not equal.

$7 - 2 = 5$

$25 - 6 = 18$

$15 - 11 = 4$

Questions

Put a slash through the equal sign (≠) if it is not balanced

	2) $12 - 4 = 6$	3) $16 - 3 = 13$
4) $25 - 8 = 17$	5) $6 = 22$	6) $29 - 13 = 16$
7) $32 - 14 = 17$	8) $11 = 1$	9) $47 - 14 = 34$
10) $48 - 10 = 38$	11) $45 - 4 = 42$	12) $3 = 2$
13) $53 - 24 = 28$	14) $52 - 8 = 45$	15) $60 - 16 = 55$
16) $50 - 0 = 50$	17) $43 - 8 = 35$	18) $45 - 15 = 30$
19) $68 - 30 = 38$	20) $57 - 16 = 42$	21) $75 - 26 = 48$

Pre-Algebra – Balancing Subtraction Equations

Balancing equations means both sides of the equal sign must be the same.

Examples:

$$\begin{array}{c} 9 \\ \swarrow \searrow \\ 15 - 6 = \boxed{9} \end{array}$$

$$\begin{array}{c} 21 \\ \swarrow \searrow \\ 27 - 6 = \boxed{21} \end{array}$$

Questions

Fill in the missing number to balance the equation

1) 11

2) $11 - 6 =$ 3) $10 - 5 =$ 4) $10 -$ $= 5$ 5) $11 -$ $= 6$ 6) $14 -$ $= 10$

7)

 $- 6 = 10$

8)

 $- 5 = 12$ $- 8 = 12$ 10) $35 - 10 =$ 11) $62 -$ $= 40$ 13) $24 -$ $= 17$ 14) $28 - 6 =$ 15) $18 -$ $= 16$ 16) $43 -$ $= 35$ 17) $45 - 15 =$ 18) $25 -$ $= 10$ 19) $46 -$ $= 31$ 20) $25 - 21 =$ 21) $45 -$ $= 10$

Word Problems: Balancing Subtraction Equations**Questions**

Solve the word problems below

	Word Problems Balancing Subtraction Equations	Answers
1	At a bake sale, there are x cupcakes. If 5 cupcakes are sold and there are 10 left, how many were there to start with?	
2	There were y pencils in a box. After giving away 7 pencils to classmates, there are 12 left. How many pencils were in the box originally?	
3	There were 20 balloons at a party. A certain number of balloons popped, and now there are 15 left. How many balloons popped?	
4	Alex had x dollars saved up. He bought a video game for \$12. Now he has \$9 left. How much money did Alex have to start with?	
5	Chloe has 13 storybooks. She donates n number of books to a library and still has 7 books. How many books did Chloe donate?	
6	Ava collected x seashells on the beach. She gave 10 to her friend and has 5 left. How many seashells did she collect at first?	
7	Omar had y stickers. After trading away 9 stickers, he has 14 stickers remaining. How many stickers did Omar have to begin with?	

PREVIEW

Subtraction - Which Equation Matches?

Two of the equations equal the same number. Which one matches the shaded in equation

Example

$19 - 8$

$15 - 4$

$21 - 9$



Question

Circle the equation that matches the shaded in equation

1)

2)

$21 - 9$

$19 - 6$

2)

$33 - 11$

3)

$30 - 8$

3)

$41 - 7$

4)

$48 - 13$

4)

$47 - 20$

$31 - 5$

5)

$58 - 13$

$65 - 20$

$63 - 19$

6)

$89 - 14$

$80 - 15$

$90 - 15$

7)

$110 - 10$

$109 - 8$

$113 - 13$

Subtraction – Using Symbols



Part 1

Find out the value of the symbol

1) $\bullet - 30 = 8$

2) $51 - \blacktriangle = 29$

3) $95 - \bullet = 65$

$\blacktriangle =$

$\bullet =$

4) $112 =$

5) $\blacklozenge - 20 = 47$

6) $120 - 70 = \blacklozenge$

$\blacklozenge =$

$\blacklozenge =$

7) $133 - \blacktriangle = 70$

9) $189 - \bullet = 151$

$\blacktriangle =$

$\bullet =$

Part 2

Write your own questions using any symbol you like. Write the question and its answer.

1)

2)

3)

4)

Exit Cards

Cut Out

Cut out the exit cards below and have students complete them at the end of class

Name: _____

Find out the value of the symbol.

1) $\bullet - = 8$

2) $39 - \blacktriangle = 29$

3) $76 - 25 = \blacklozenge$

4) $183 - 32 = \bullet$

Name: _____

Find out the value of the symbol.

1) $\bullet - 56 = 8$

2) $39 - \blacktriangle = 29$

3) $76 - 25 = \blacklozenge$

4) $183 - 32 = \bullet$

Name: _____

Find out the value of the symbol.

1) $\bullet - 56 = 8$

2) $39 - \blacktriangle = 29$

3) $76 - 25 = \blacklozenge$

4) $183 - 32 = \bullet$

Name: _____

Find out the value of the symbol.

1) $\bullet - 56 = 8$

2) $39 - \blacktriangle = 29$

3) $76 - 25 = \blacklozenge$

4) $183 - 32 = \bullet$

PREVIEW

Subtraction – Find the Variable

A **variable** is a letter that represents an unknown number. When we don't know a number, we can use a letter to take the place of the unknown number.

Example: $18 - n = 5$

We can figure out the unknown number by balancing the equation. In this equation, $n = 13$.

Question

Find out the value of the variable

$18 - n = 5$ $n =$	$n - 5 = 5$ $n =$	$22 - n = 10$ $n =$
$25 - 10 = p$ $p =$		$p - 8 = 15$ $p =$
$31 - y = 30$ $y =$	$y - 14 = 27$ $y =$	$15 - 35 = y$ $y =$
$65 - t = 90$ $t =$	$28 - t = 20$ $t =$	$12 - 15 = t$ $t =$
$24 - a = 17$ $a =$	$50 - a = 30$ $a =$	$63 - a = 50$ $a =$
$76 - 30 = s$ $s =$	$62 - s = 22$ $s =$	$51 - s = 39$ $s =$

PREVIEW

Word Problems – Writing Subtraction Equations

Questions

Answer the questions below

1) Harry bought 15 donuts. Him and a friend ate 5 of them. Which equation will tell us how many donuts there are left?

$$d - 5 = 15$$

$$15 - 5 = d$$

$$5 + d = 15$$

$$5 - d = 15$$

2) Kevin and his friends were having a fire. They had 18 logs for the fire. After the fire, they only had 4 logs left. Which equation tells us how many logs they burned?

$$b - 4 = 18$$

$$18 - 4 = b$$

$$18 - b = 4$$

$$4 - b = 18$$



3) Tom collected 73 shells on the beach. He gave 13 shells to his sister. Now he has 60 shells left. Which equation tells us how many shells he gave to his sister?

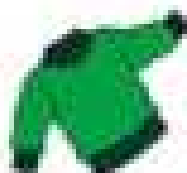
$$73 - s = 60$$

$$60 - s = 73$$

$$s - 60 = 73$$

$$60 - 73 = s$$

4) Courtney saved 75 dollars. She bought a new sweater. She now has 45 dollars left. Which equation tells us how much the sweater cost?



$$75 - s = 45$$

$$75 - 45 = s$$

$$45 + s = 75$$

$$s - 45 = 75$$

5) The movie is 93 minutes long. They have watched 31 minutes. Which equation tells us how many minutes are left?

$$m - 31 = 93$$

$$93 - 31 = m$$

$$31 + m = 93$$

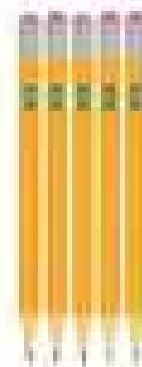
$$31 - m = 93$$



Word Problems – Solving Subtraction Equations**Questions**

Answer the questions below. Write the subtraction equation sentences.

1) Mrs. Wilson had 64 pencils at the start of the school year. She gave all the kids in her class one pencil. She now has 36 pencils. How many students are in Mrs. Wilson's class?

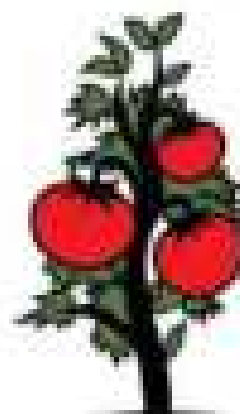


2) Hudson saved 95 dollars. He bought a toy for 26 dollars. How many dollars does he have left?



Bonus: He saved 15 more dollars. Can he buy a toy that costs 100 dollars?

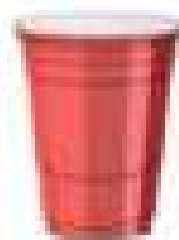
3) The grade 4 class planted 149 tomato seeds but only 37 tomato plants grew. How many plants did not grow?



Math Activity Title: Algebraic Bottle Flip Challenge**Objective**

What are we learning about?

To practice and reinforce understanding of basic one-step subtraction algebra problems through the engaging and physically active bottle flip game.

**Materials**

What you will need for the activity

- Plastic bottle (or cup) per pair (group) filled to approximately one-third with water
- Set of subtraction algebra question cards
- Answer sheet per pair (group)

Instructions

How you will play

1. Start with a short lesson on one-step subtraction algebra problems, using examples like $x - 3 = 4$.
2. Arrange the students into pairs or small groups. Give each group a bottle and a set of question cards to each.
3. Each pair or group receives an answer sheet to record their answers.
4. Explain the rules: One student draws a question card and writes the subtraction algebra problem.
5. Once they believe they have the correct answer, they write it down on the answer sheet.
6. The student then gets to attempt a bottle flip. A successful flip means they can move on to the next question; an unsuccessful flip means they need to try to solve another question card before flipping again.
7. Alternate turns within each group or pair until they have completed all the question cards.
8. Groups or pairs tally their successful flips and compare with the rest of the class to determine the winning team.
9. Go through the answer sheet with the class to ensure understanding and correct any misconceptions.
10. Discuss the strategies used to solve the subtraction problems and how this type of algebra is used in real-life situations.

Questions

Cut out the questions below and use for the game.

$x - 4 = 12$

$y - 3 = 15$

$z - 2 = 20$

$a - 5 = 25$

$b - 6 = 24$

$c - 7 = 23$

$d - 8 = 32$

$e - 9 = 41$

$f - 6 = 54$

$s - 5 = 55$

$t - 7 = 73$

$u - 8 = 82$

$v - 12 = 48$

$w - 11 = 49$

$x - 13 = 87$

$y - 14 = 86$

$z - 7 = 92$

$a - 1 = 99$

$b - 2 = 98$

$c - 3 = 97$

Sam had 30 marbles and lost some. Now he has 15. How many did he lose?

Max had 18 marbles and ate some. Now he has 9. How many did he eat?

Leah had 24 books and gave some away. Now she has 9. How many did she give away?

Max had 20 cards and traded some away. Now he has 8. How many did he trade?

Chris had 35 pencils and lost some. Now he has 20. How many did he lose?

Dana had 40 stickers and used some. Now she has 12. How many did she use?

Tom had 50 balloons and broke some. Now he has 30. How many did he break?

Nora had 45 beads and used some. Now she has 30. How many did she use?

Claire had some candies. She eats 12 and now has 20 left. How many did she have to start with?

Emma had a certain number of toy cars. She lost 8 of them and now she has 16 left. How many did she have before?

Sophie had a number of pencils. She gave 7 to her friend and now has 28 left. How many pencils did Sophie start with?

Mia had a bunch of grapes. She ate 20 grapes and now has 35 left. How many grapes were there in the bunch initially?

Questions

Cut out the questions below and use for the game

Lucas had some stickers. He gave away 15 and now has 30 left. How many stickers did he have at first?

Aiden had some balloons. 10 balloons popped and now he has 25 left. How many balloons did Aiden have at first?

Oliver collected some seashells. He gave 14 to his sister and now has 21 left. What was the original number of seashells Oliver had?

Ethan had some trading cards. He traded away 18 and now has 40 left. How many trading cards did Ethan have at the beginning?

Harper had some pages left to read in her book. After reading 32 pages, she has 48 pages left. How many pages were in her book?

If there are 100 bees, and _____ fly away, 49 are left. How many flew away?

If you have 100 coins, spend _____ and 86 remain. How many were spent?

Start with 100 toys, donate _____ and 41 are left. How many were donated?

If there are 100 days left of school, and _____ pass, 13 are left. How many days have gone by?

There are 100 marbles. _____ go missing, and 66 are left. How many went missing?

If you have 100 pencils, and _____ break, 49 are left. How many broke?

Find the missing number:
_____ - 15 = 65

Solve for x :
 $x - 4 = 44$

What is y if
 $y - 3 = 57$?

What is z if
 $z - 5 = 55$?

Algebraic Bottle Flip Challenge**Answers**

Record your answers below

1		13		25	
2		14		26	
3		15		27	
4				28	
5				29	
6		18			
7		19		31	
8		20		32	
9		21		33	
10		22		34	
11		23		35	
12		24		36	

PREVIEW

Multiplication – Are They Equal?

Are the equations equal? Put a slash through the equal sign for any equations that are not equal.

$2 \times 2 = 5$

$3 \times 3 = 9$

$5 \times 2 = 11$

Questions:

Put a slash through the equal sign (\neq) if it is not balanced.

	2) $10 \times 3 = 30$	3) $2 \times 3 = 5$
4) $5 \times 5 = 25$	5) $7 = 8$	6) $3 \times 5 = 16$
7) $10 \times 2 = 12$	8) $5 = 5$	9) $5 \times 4 = 20$
10) $10 \times 10 = 90$	11) $2 \times 7 = 14$	12) $2 = 2$
13) $10 \times 4 = 40$	14) $5 \times 1 = 10$	15) $10 \times 5 = 16$
16) $2 \times 10 = 20$	17) $5 \times 8 = 40$	18) $3 \times 10 = 30$
19) $2 \times 7 = 14$	20) $7 \times 5 = 30$	21) $10 \times 4 = 40$

Multiplication – Which Equation Matches?

Two of the equations equal the same number. Which one matches the shaded in equation

Example

2×3

1×6

4×2



Question

Circle the equation that matches the shaded in equation

1)

3×2

10×1

6×2

2)

6×3

2×9

3)

5×4

10×2

6×3

4)

8×2

4×4

5)

9×4

7×5

6×6

6)

10×3

7×5

6×5

7)

8×3

6×4

7×3

Multiplication – Using Symbols



Part 1

Find out the value of the symbol

1) $\bullet \times 3 = 12$	2) $5 \times \blacktriangle = 45$ $\blacktriangle =$	3) $4 \times \bullet = 32$ $\bullet =$
4) $\blacktriangle \times 9 =$	5) $\blacklozenge \times 4 = 44$ $\blacklozenge =$	6) $7 \times 10 = \blacklozenge$ $\blacklozenge =$
7) $2 \times \blacktriangle = 60$ $\blacktriangle =$	8) $\bullet \times 5 = 25$ $\bullet =$	9) $10 \times \bullet = 150$ $\bullet =$

Part 2

Write your own questions using any symbol you like. Give the answer.

1)	2)
3)	4)

Activity – Equation Explorers

Objective

What are we learning about?

To help students understand and solve one-step equations using symbols to represent unknown values.



Materials

What you will need for the activity:

- Small white sheets of paper
- Dry erase markers or pencils
- A set of equation cards (one-step equations like $3n = 6$)
- Tokens or small rewards

Instructions

How you will complete the activity:

1. Begin the activity by explaining what a one-step equation is and demonstrate a few examples on the board. Explain that the letter represents an unknown value that we need to find.
2. Distribute a paper and pencil to each student.
3. Hand out one equation card to each student. Ensure the questions are challenging, but remain simple enough to solve in one step.
4. Give the students a few minutes to solve the equation on their cards, writing the solution on their paper.
5. Once everyone has a solution, ask students to swap their boards or papers with a partner to check each other's work.
6. Discuss as a class some of the solutions, especially any that were tricky or where mistakes were made, to clarify the correct methods.
7. For correctly solved equations, award tokens or small rewards to encourage participation and effort.

Multiplication Equations

Cut out the questions below and distribute to each student.

$12a = 36$

$11b = 44$

$15c = 45$

$13d = 52$

$14e = 56$

$16f = 64$

$17h = 68$

$19i = 76$

$12j =$

$18k = 39$

$11l = 33$

$15m = 60$

$20n = 80$

$21o = 63$

$22p = 66$

$25q = 75$

$23s = 46$

$19t = 57$

$16v = 64$

$17w = 51$

$14x = 42$

$13y = 39$

$21z = 84$

$22a = 44$

$20b = 100$

$12c = 36$

$15d = 75$

PREVIEW

Pre-Algebra – Balancing Division Equations

Balancing equations means both sides of the equal sign must be the same.

$$\begin{array}{c} 5 \\ \wedge \\ 15 \div 3 = \boxed{5} \end{array}$$

Examples:

$$\begin{array}{c} 5 \\ \wedge \\ \boxed{10} \div 2 = 5 \end{array}$$

Questions

Fill in the missing number to balance the equation

1) $6 \div \square = 2$

2) $4 \div 3 = \square$

3) $10 \div \square = 5$

4) $6 \div \square = 2$

5) $\square = 5 \div 5$

6) $\square = 10 \div 2$

7) $5 \div 1 = \square$

8) $20 \div \square = 4$

9) $15 \div \square = 3$

10) $10 \div 10 = \square$

11) $25 \div \square = 5$

12) $30 \div 6 = \square$

13) $10 \div \square = 2$

14) $18 \div 2 = \square$

Division – Which Equation Matches?

Two of the equations equal the same number. Which one matches the shaded in equation



$12 \div 4$

Example

$9 \div 3$

$16 \div 4$

Question

Circle the equation that matches the shaded in equation

1)

$10 \div 2$

$5 \div 1$

$12 \div 6$

2)

$6 \div 3$

1

$12 \div 6$

3)

$16 \div 4$

$14 \div 7$

$28 \div 7$

4)

$25 \div 5$

$10 \div 2$

5)

$8 \div 2$

$15 \div 3$

$16 \div 4$

6)

$18 \div 3$

$30 \div 5$

$42 \div 6$

7)

$24 \div 6$

$49 \div 7$

$40 \div 10$

Division – Using Symbols



Part 1

Find out the value of the symbol.

1)

$$\bullet + 3 = 5$$

2)

$$25 \div \blacktriangle = 5$$

$$\blacktriangle =$$

3)

$$32 \div \bullet = 8$$

$$\bullet =$$

4)

$$\blacktriangle + 2 =$$

$$\blacktriangle =$$

5)

$$\blacklozenge \div 6 = 4$$

$$\blacklozenge =$$

6)

$$60 \div 10 = \blacklozenge$$

$$\blacklozenge =$$

7)

$$48 \div \blacktriangle = 6$$

$$\blacktriangle =$$

9)

$$90 \div \bullet = 10$$

$$\bullet =$$

Part 2

Write your own questions using any symbol you like. Give the answer.

1)

2)

3)

4)

Division – Find the Variable

A **variable** is a letter that represents an unknown number. When we don't know a number, we can use a letter to take the place of the unknown number.

Example: $15 \div n = 3$

We can figure out the unknown number by balancing the equation: $n = 5$.



Quest

Find out the value of the variable

	$n \div 5 = 3$ $n =$
$10 \div 1 = p$ $p =$	$20 \div p = 2$ $p =$
$10 \div n = 2$ $n =$	$8 \div t = 2$ $t =$
$30 \div n = 10$ $n =$	$10 \div n = 10$ $n =$
$50 \div n = 5$ $n =$	$20 \div 4 = s$ $s =$
$10 \div s = 2$ $s =$	

Division – Bar Model**Questions**

Use the bar model to answer the division questions below

1) $48 \div 8$

48					

2) $36 \div 4$

36			

3) $48 \div 6$

48					

4) $80 \div 10$

80							

5) $24 \div 4$

24			

6) $30 \div 5$

30					

7) $42 \div 7$

42					

8) $72 \div 8$

72							

9) $49 \div 7$

49					

10) $48 \div 4$

48			

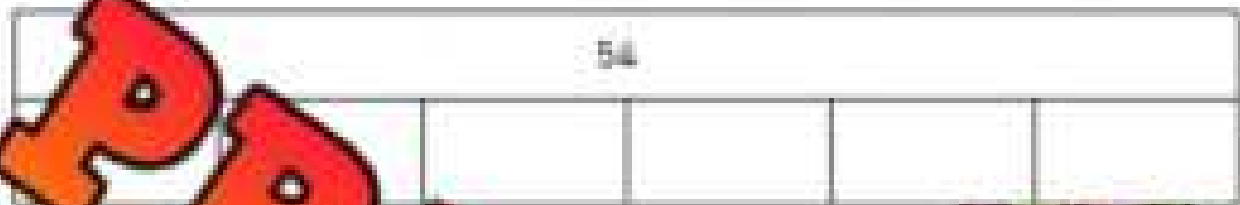
PREVIEW

Division Word Problems – Bar Model

Questions

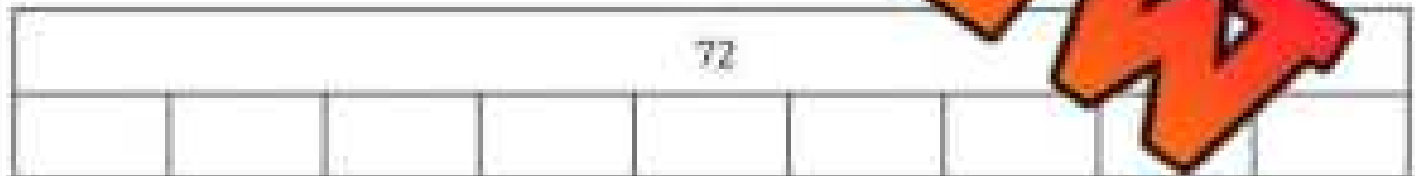
Use the bar model to answer the division questions below

1) Courtney has 54 candies to give away to her 6 friends. How many candies will each friend get?



Division Equation Sentence: _____

2) Haley has \$72 to spend on vacation. She is going to spend a certain amount each day to find out how much she can spend each day. She is on vacation for 6 days. How much money can she spend each day?



Division Equation Sentence: _____ + _____ = _____

Division Word Problems – Bar Model

Questions

Use the bar model to answer the division questions below

1) Alex and her friends made \$28 selling lemonade. She split the \$28 equally between her and her friends. How many friends got paid \$7?



Division Equation Sentence: _____

2) Justin has 32 candies. He gives 4 candies to each of his friends. How many friends did Justin give candies to?



Division Equation Sentence: _____ ÷ _____ = _____

Algebra Jeopardy

Objective

What are we learning about?

To reinforce students' understanding of basic algebraic concepts and their application to solve simple equations and word problems in a fun and competitive game for

Materials

What will need for the activity?

- Jeopardy board and questions
- Buzzer or bell

**Instructions**

How you will complete the activity

1. Print the Jeopardy board on the next page.
2. Divide the class into two teams.
3. Ask one team to go first by selecting a point value.
4. Read the question aloud from the point value.
5. The first team to ring the bell or buzzer gets to answer.
6. If they answer correctly, award them the points. If not, another team can answer.
7. Continue the game until all questions have been answered.
8. Tally the points to determine the winning team.
9. Conclude by discussing what they learned about the topic in the questions.

Jeopardy Questions

Ask students the questions below

\$100	\$200	\$300	\$400	\$500
$5p = 30$. Find p . 6	$x + 7 = 12$. What is x ? 5	If $4n$ is 24, what is n ? 6	$3m - 8 = 7$. Solve for m . 6	Sophia's sister is 30 years old. She is 4 years older than twice Sophia's age. How old is Sophia? 13
$6q = 18$. What is q ? 3	8 is $2k$. What is k ? 4	$2b + 6 = 16$. Solve for b . 5	Mia has 3 times as many marbles as Lily. Together they have 32 marbles. How many does Lily have? 8	
$10r = 40$. What is r ? 4	$w + 5 = 10$. What is w ? 5	$3j$ is 27. What is j ? 9	$4s - 8 = 8$. Find s . 5	There are 28 apples in a basket. The number of apples is 4 times the number of oranges. How many oranges are there? 7
$7t = 42$. Solve for t . 6	$1 + 4 = 5$. Find t . 9	$3j$ is 27. What is j ? 9	$4v + 1 = 21$. Solve for v . 5	John has twice as many cars as Dover. If the number of cars is 10, how many cars does John have? 20
$8a = 56$. Find a . 7	$u + 8 = 15$. What is u ? 7	The product of 7 and a number is 49. What is the number? 7	$6e - 12 = 24$. Solve for e . 6	Emma saved \$27. This is 3 times the amount that Ava saved. How much did Ava save? \$9
$9f = 63$. What is f ? 7	$v + 5 = 11$. What is v ? 6	If 9 times a number is 81, what is the number? 9	$7g + 14 = 35$. Find g . 3	A baker baked 60 cookies. He baked 4 times as many chocolate chip cookies as sugar cookies. How many sugar cookies did he bake? 12

PREVIEW

Equality or Inequality?**Questions**

Solve each side of the equation and label it = (equality) or ≠ (inequality)

1) $3 + 3$ $4 + 2$

2) $2 + 6$ $7 + 2$

3) $9 + 2$ $4 + 2$

4) 7

5) $12 + 3$ $10 + 6$

6) $13 + 6$ $20 + 0$

7) $15 + 8$ 7

8) $10 + 7$

9) $6 + 6$ $11 + 1$

10) $23 + 10$ $30 + 3$

11) 21 $7 + 14$

12) $24 + 6$ $30 + 0$

13) $32 + 5$ $15 + 17$

14) $36 + 5$ $41 + 2$

15) 40 $25 + 25$

16) $16 + 12$ $19 + 9$

17) $36 + 7$ $40 + 2$

18) $42 + 4$ $20 + 24$

19) $32 + 3$ $15 + 15$

20) $13 + 12$ $25 + 0$

21) $18 + 11$ $9 + 20$

22) $34 + 8$ $22 + 22$

23) $41 + 8$ $33 + 16$

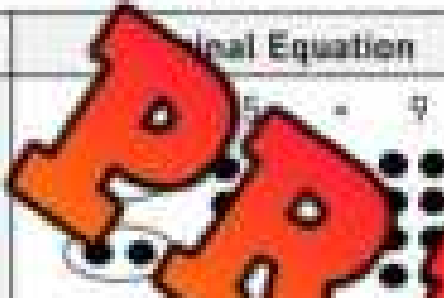
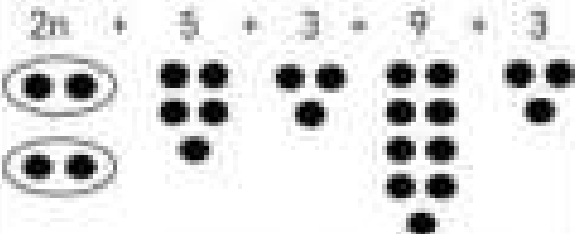
24) $23 + 16$ $15 + 12$

Preservation of Equality

When we add or subtract the same amount from both sides of an equal sign, the equation does not change. This is called **preservation of equality** as the equation stays equal when you change both sides of the equal sign by the same amount.

Instructions

Draw circles to represent the equations.

#	Original Equation	Change	New Equation
1	$2n + 5 = 9$ 	Add 3	$2n + 5 + 3 = 9 + 3$ 
2	$8 + n$		
3	$12 - n = 7$	Add 3	
4	$3n + 4 = 13$	Subtract 5	
5	$3 + 4n = 15$	Add 7	

Preservation of Equality

Instructions

Write four equivalent forms of the equations below.

#	Original Equation
1	$4n = 20$
	Add 4 to each side
	Subtract 4 from each side
	Multiply each side by 4
	Divide each side by 4

#	Original Equation
2	$3x - 13 = 2$
	Add 13 to each side
	Subtract 13 from each side
	Multiply each side by 3
	Divide each side by 6

#	Original Equation
3	$5n - 5 = 25$
	Add 50 to each side
	Subtract 20 from each side
	Multiply each side by 4
	Divide each side by 5

Preservation of Equality

When we change an equation by adding, subtracting, multiplying, and dividing the same amount from both sides, does the equation change? Investigate below!

Instructions

Fill in the table below.

#	Original Equation	Change	New Equation
1	$5n + 10 = 20$ $n = 4$	Add 10 to each side	$5n + 10 = 20 + 10$ $n = 4$
2	$15 + n = 2$ $n = -13$	Add 7 to each side	
3	$15 + n = 2$ $n = -13$	Subtract 15 from each side	
4	$6n = 12$ $n = 2$	Multiply each side by 7	
5	$2n = 16$ $n = 8$	Divide each side by 2	
6	$52 - n = 34$ $n = 18$	Subtract 15 from each side	
7	$68 + n = 85$ $n = 17$	Add 13 to each side	
8	$5n = 50$ $n = 10$	Multiply each side by 4	
9	$3n = 27$ $n = 9$	Divide each side by 3	

Writing Algebraic Expressions

Using algebraic expressions helps us understand mathematical situations. We can use a variable to replace a changing number, like how many tickets are sold to a game: $10t$ ($t = 10$)



Part 1

Write each algebraic expression in words.
Use the words, "a number" in place of the variable.

1) $7 - t$

Seven _____ a number

2) n

3) $8 + b$

4) $9r$

5) $\frac{y}{3}$

Part 2

Write an algebraic expression for each situation.

1) Nineteen add a number

2) Divide a number by three

3) A number is subtracted by nineteen

4) Triple a number and add seven

5) Subtract 19 from a number, then multiply by four

Writing Algebraic Expressions - Treats

A mathematical expression is similar to an equation, but it does not have an equal sign. We use expressions to describe a mathematical situation.

Instructions

Write the expressions for the situations below

1) Lindsay has a amount of cookies. She gives 32 cookies away to the students in her class.

Expression:



2) Corey cuts c brownies into b pieces. She eats 2 brownies.

Expression:



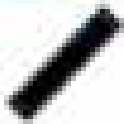
3) Alyse makes c cupcakes equally with her 4 friends.

Expression:



4) Hani gives 2 freeties to each of his f friends.

Expression:



5) Scott has 11 sodas in his fridge and buys s more sodas.

Expression:



6) Dan buys 2 dozen donuts and eats d number of donuts for breakfast.

Expression:



7) Steve buys x number of cookies and gives 15 to his staff.

Expression:



8) Alexa has 35 suckers that she shares equally with her f number of friends.

Expression:



9) Brian has 200 gummy worms and takes n number of gummies from his brother.

Expression:



10) Howard gives 3 books each to s number of students.

Expression:



Evaluating Algebraic Expressions

Part 1Evaluate the following expressions for $x = 3$.When a number is beside a variable, we multiply: $8n$

1) $x + 13$ $3 + 13 = 16$	2) $7x$	3) $42 - x$
4) 9	5) $11x$	6) $5x$
7) $12 + x$		9) $15 + x$

Part 2Evaluate the following expressions for $y = 6$.

1) $y - 5$	2) $5y$	3) $6y$
4) $30 + y$	5) $y + 74$	6) $y - 2$
7) $y + 2$	8) $66 + y$	9) $121 + y$

Evaluating Algebraic Expressions

When solving an equation, you need to follow the order of operations. This means you have to solve the equation in the correct order, not just from left to right. Using BEDMAS helps us remember the order to solve.

1. Brackets 2. Exponents 3. Division or Multiplication (whichever is first) 4. Addition or Subtraction (whichever is first)

Example 1 $y = 2$

$$2 + (1 + 2)$$

$$2 + 3$$

$$2 + 3$$

$$5$$

Example 2 $y = 5$

$$y - (1 + 2)$$

$$5 - (1 + 2)$$

$$5 - 3$$

Example 3 $y = 3$

$$10 - 3 \times y$$

$$10 - 3 \times 3$$

$$10 - 9$$

$$1$$

Part 1

Evaluate the following expressions for $x = 4$

1) $x + 15 - 3$

2) $4 + x$

3) $42 - 2x$

4) $4 \times 9 + x$

5) $11x - (5 + 5)$

Part 2

Evaluate the following expressions for $y = 6$

1) $y + 7 - 2 \times 5$

2) $6 + 7y - 4$

3) $100 - 2y \times 2$

Order of Operations – Who's Right?

Instructions

Ben and Dan both answered the questions below. Circle Who's right.



	Question	Ben's Answer	Dan's Answer
1	$y = 3$ $2 + (y + 5)$	10	8
2	$y = 5$ $3y$	10	0
3	$y = 3$ $y + 3x$	15	11
4	$y = 6$ $3y + 5$	23	33
5	$y = 8$ $y - 4 = 2$	2	
6	$y = 4$ $y + (8 - 3) \times 2$	14	18
7	$y = 7$ $y - 2 \times (5 - 2)$	1	15
8	$y = 20$ $100 \div (5 + y)$	40	4

PREVIEW

Evaluating Algebraic Expressions

Part 1Evaluate the following expressions for $x = 4$.

1) $x + 16$ _____	2) $10x$ _____	3) $63 - x$ _____	4) $x + 2$ _____
5) $16x$ _____	6) $12x$ _____	7) $4x - x$ _____	8) $12 + x + 8$ _____

Part 2Evaluate the following expressions for $y = 7$ and $n = 5$.

1) $y - n + 22$ _____	2) $11n - y + n$ _____	4) $y + 7 + n$ _____
5) $35 + y + 5$ _____	6) $11n - y$ _____	7) $60 + n + y$ _____

Part 3Evaluate the following expressions for $x = 9$ and $p = 2$.

1) $x + p - 10$ _____	2) $10x + (2p)$ _____	3) $54 + x - p$ _____	4) $x + 9 + (3p)$ _____
5) $18 + x + (5p)$ _____	6) $9x - (18 - p)$ _____	7) $6x - 5p$ _____	8) $8p + 3x$ _____

Writing Expressions

There are an endless number of expressions that represent the same number. For example, both of the expressions below equal 10.

when $y = 5$

Equation 1

$y + 5$

Equation 2

$4y - 10$

Part 1 Write four different expressions that represent the number 8. Use $y = 3$.

1)

2)

3)

Part 2 Write four different expressions using multiplication or division that represents the number 6. Use $y = 10$.

1)

2)

3)

4)

Algebra Quiz - Equations**Part 1**

Put a slash through the equal sign (=) if it is not balanced

1) $15 + 10 = 25$

2) $40 + 10 = 50$

3) $45 - 5 = 42$

5) $6 \times 4 = 22$

6) $30 \div 3 = 10$

Part 2

Write the missing number to balance the equation

1) $15 + 8 = \square$

3) $9 + \square = 15$

4) $25 + 12 = \square$

5) $\square + 12 = 28$

7) $25 - 8 = \square$

8) $\square - 9 = 12$

10) $28 - 13 = \square$

11) $\square - 12 = 22$

12) $32 - 15 = \square$

13) $\square \times 4 = 20$

14) $10 \times \square = 30$

15) $24 \div \square = 6$

16) $30 \div 6 = \square$

Part 3

Find out the value of the variable

$7 + n = 10$ $n =$	$n - 5 = 5$ $n =$	$2 \times n = 10$ $n =$	$20 + n = 10$ $n =$
$n + 16 = 22$ $n =$	$n - 3 = 6$ $n =$	$n \times 5 = 15$ $n =$	$12 - 4 = n$ $n =$

Part 4

Find out the value of the variable

$a + b = c$ _____ + _____ = _____	$a = 2$ $b = 2$ $c =$	$n + y = t$ _____ + _____ = _____	$n = 5$ $y = 10$ $t = 5$
$a - b = c$ _____ - _____ = _____	$a = 13$ $b = 1$ $c =$	$e = 26$ $n = 6$ $f =$	$f =$
$a \times b = c$ _____ \times _____ = _____	$a = 5$ $b = 5$ $c =$	$r =$ _____ \times _____ = _____	$k =$

Part 5

Solve the word problem below. Make sure to write the equation.

Alexa saved 34 dollars from her allowance. She was given some money from her grandmother for her birthday. She now has 78 dollars. How much did her grandmother give her?

Part 6

Follow the problem-solving steps below

- Read the problem carefully
 Underline important information
 Draw pictures
 Create a table or chart
 Solve the problem
 Check your answer

1) Sara has 25 candies to give to her 5 friends. How many candies will each of her friends get?

2) Spencer has 24 marbles to give to each of his friends. How many friends got marbles?

4	

3) Sam has 173 stickers. He gives some stickers to his friends. Now he has 141 stickers. How many stickers did he give away?



Part 7

Evaluate the following expressions for $x = 6$.

1) $x + 11 - 9$	2) $4 + 3x$	3) $40 - 2x$
4) $6 + 12 + x$	5) $4x - (5 + 5)$	6) $x + 3 \times 6$

Part 8

Emilio and Savanna answered the questions below. Circle who's right.

	Question	Answer	Savanna's Answer
1	$y = 4$ $3 + (y + 5)$		14
2	$y = 3$ $20 - 5y$	5	
3	$y = 2$ $y + 3 \times 3$	15	11
4	$y = 4$ $y + 16 \div 2$	12	10
5	$y = 6$ $y - 4 \times 2$	0	8

PREVIEW