



Preview - Information



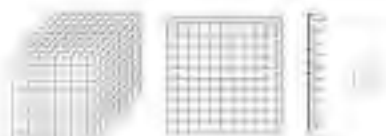
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Grade 4
Strand: Number



	Curriculum Expectations	Pages
N4.1	Demonstrate an understanding of whole numbers to 10 000 (pictorially, physically, orally, in writing, and symbolically) by: <ul style="list-style-type: none"> - representing - describing - comparing two numbers - ordering three or more numbers. 	5-34
N4.2	Demonstrate an understanding of addition of whole numbers with answers to 10 000 and their corresponding subtractions (limited to 3 and 4- digit numerals) by: <ul style="list-style-type: none"> - using personal strategies for adding and subtracting - estimating sums and differences - solving problems involving addition and subtraction 	37-88
N4.3	Demonstrate an understanding of multiplication of whole numbers (limited to numbers less than or equal to 10) by: <ul style="list-style-type: none"> - applying mental mathematics strategies - explaining the results of multiplying by 0 and 1 	92-130
N4.4	Demonstrate an understanding of multiplication (2- or 3-digit by 1- digit) by: <ul style="list-style-type: none"> - L - L - C - E - S 	9
N4.5	De di <ul style="list-style-type: none"> - L - E - S - relating division to multiplication.	5
N4.6	Demonstrate an understanding of fractions less than or equal to one by using concrete and pictorial representations to: <ul style="list-style-type: none"> - name and record fractions for the parts of a whole or a set - compare and order fractions - model and explain that for different wholes, two identical fractions may not represent the same quantity - provide examples of where fractions are used. 	178-209
N4.7	Demonstrate an understanding of decimal numbers in tenths and hundredths (pictorially, orally, in writing, and symbolically) by: <ul style="list-style-type: none"> - describing - representing - relating to fractions. 	212-234
N4.8	Demonstrate an understanding of addition and subtraction of decimals limited to hundredths (concretely, pictorially, and symbolically) by: <ul style="list-style-type: none"> - using compatible numbers - estimating sums and differences - using mental math strategies - solving problems. 	237-273
TQ4	Assessment <ul style="list-style-type: none"> - Tests and Quizzes 	26 - 27, 89 - 91, 176 - 177, 235 - 236, 273 - 275

Preview of 125 pages from
this product that contains
548 pages total.

Name: _____

5

Curriculum Connection
N4.1

Place Value Chart

3937

Thousands	Hundreds	Tens	Ones
3	9	3	7

Part 1

Fill in the place value charts below

1) 4 287

Thousands	Hundreds	Tens	Ones

2) 2 142

Thousands	Hundreds	Tens	Ones

3) 5

Thousands	Hundreds	Tens	Ones

4) 7 483

Thousands	Hundreds	Tens	Ones

5) 3 659

Thousands	Hundreds	Tens	Ones

6) 684

Thousands	Hundreds	Tens	Ones

Part 2

Which place value is the underlined number?

1) 3 <u>5</u> 75 Tens	2) 5 1 <u>8</u> 4	3) 2 <u>1</u> 38
4) 8 <u>3</u> 21	5) 2 <u>8</u> 39	6) 9 5 <u>6</u> 2
7) 2 <u>9</u> 62	8) 5 3 <u>5</u> 4	9) 9 3 <u>0</u> 3

Name: _____

6

Curriculum Connection
N4.1

Place Value – How Many...

Number	# of Thousands	# of Hundreds	# of Tens	# of Ones
4 248	4	2	4	8

Part 1

Fill in the table below

#	Number	# of Thousands	# of Hundreds	# of Tens	# of Ones
1.					
2.	2 364				
3.	7				
4.	8 937				
5.	3 489				
6.	4 218				
7.	7 452				
8.	7 217				
9.	9 679				
10.	6 631				

Part 2

Answer the riddles below

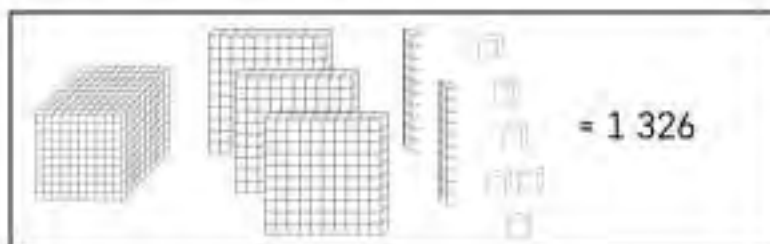
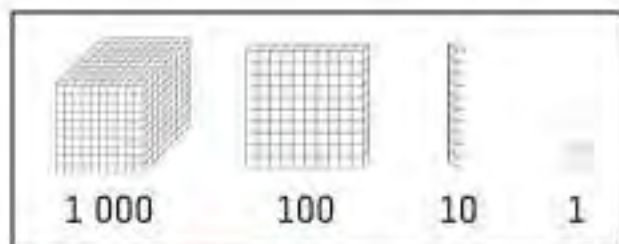
Questions	Answers
1) My number has 4 tens, 3 less ones than tens. What is my number?	
2) My number has 7 hundreds, 8 ones and half as many tens as ones. What is my number?	

Name: _____

7

Curriculum Connection
N4.1

Base Ten Blocks



Part 1

How many blocks do you count?

1. _____

2. _____

3. _____

Part 2

Draw the base ten blocks to represent the number.

1) 2 375

2) 1 184

3) 4 542

4) 4 263

Exit Cards

Cut Out

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

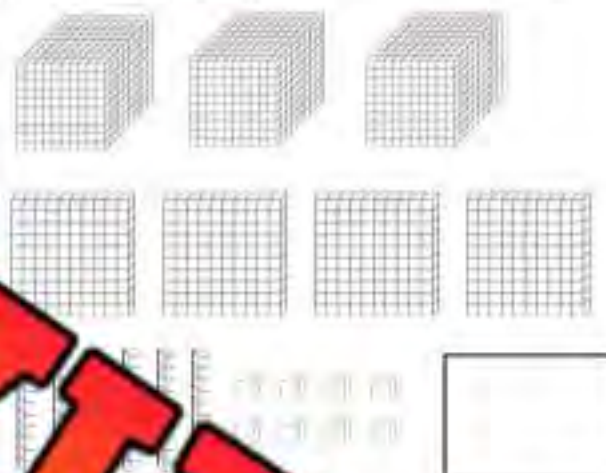
Name: _____

What is the value represented by the base ten blocks?



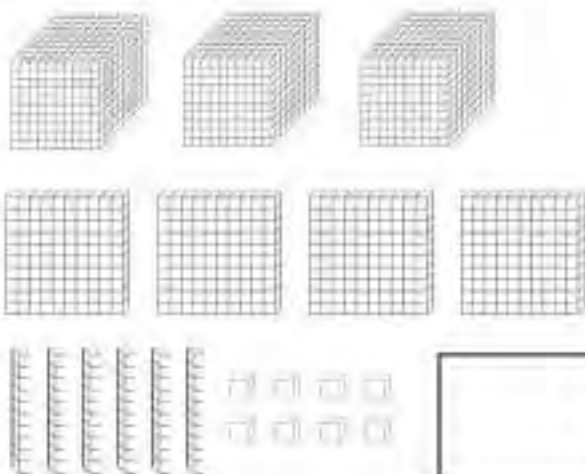
Name: _____

What is the value represented by the base ten blocks?



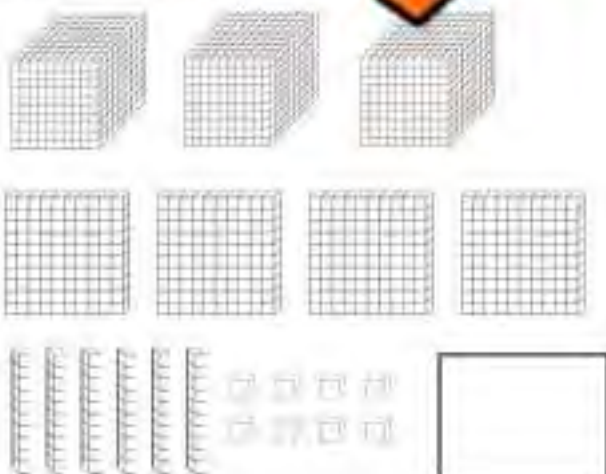
Name: _____

What is the value represented by the base ten blocks?



Name: _____

What is the value represented by the base ten blocks?



Name: _____

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Curriculum Connection
N4.1

Expanded Form

$2\ 372$	←	Standard Form
$2\ 000 + 300 + 70 + 2$	←	Expanded Form



Part 1

What is the standard form of the numbers below?

1) 4 000 + 10 + 4	2) 2 000 + 700 + 90 + 6	3) 1 000 + 500 + 20 + 9
4) 8 000 + 300 + 10 + 5	5) 7 000 + 200 + 40 + 5	6) 6 000 + 400 + 30 + 6
7) 8 000 + 0 + 0 + 10 + 70 + 0	8) 1 000 + 200 + 70 + 0	9) 3 000 + 500 + 70 + 2

Part 2

What is the expanded form of the number below?

1) 5 445	2) 7 344
3) 8 064	4) 7 309
5) 9 286	6) 3 246

Part 3

Fill in the blanks with the missing number

1) $4\ 523 = 4\ 000 + \underline{\hspace{2cm}} + 20 + 3$	2) $3\ 029 = \underline{\hspace{2cm}} + 0 + 20 + 9$
3) $5\ 163 = 5\ 000 + 100 + 60 + \underline{\hspace{2cm}}$	4) $2\ 460 = \underline{\hspace{2cm}} + 400 + \underline{\hspace{2cm}} + 0$

Exit Cards

Cut Out

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

Name: _____

a) Write the standard form: _____

$$8000 + 30 + 8$$

b) Write the expanded form: _____

Name: _____

a) Write the standard form: _____

$$8000 + 30 + 8$$

b) Write the expanded form: 6 814

Name: _____

a) Write the standard form: _____

$$8000 + 30 + 8$$

b) Write the expanded form: 6 814

Name: _____

a) Write the standard form: _____

$$8000 + 30 + 8$$

b) Write the expanded form: 6 814

Standard Form

Words

Expanded Form

Place Value Chart

Thousands	Hundreds	Tens	Ones

Pictures

PREVIEW

Counting Money – Base Ten

= 342

Question

Count the money below

1)



2)



3)



4)



5)



Place Value Riddles



Questions

Solve the riddles below

Questions	Answers
1) Which number has: 6 thousands, 3 hundreds, 3 less tens than hundreds, and 5 more ones than tens? <div style="text-align: center; margin-top: 20px;"> hun tens ones </div>	
2) Which number has one thousand, half as many thousands as hundreds and twice as many tens as ones?	
3) Which number has 6 thousands, half as many hundreds as thousands, 8 tens and half as many ones as tens.	
4) Which number has 9 thousands, 5 tens, 4 less hundreds than thousands and 2 less ones than hundreds.	

PREVIEW

Place Value – Number Breakdown

Questions

Fill in the blanks below

Number Breakdown

8 782

Th	T	O

Write the value of the underlined digit

1) 8 7 82 = _____

2) 8 7 82 = _____

3) 8 7 82 = _____

4) 8 7 82 = _____

Fill in the blanks using the number form below

_____ + _____ = _____

Fill in the pattern below

8 782 , _____ , 8 784 , _____ , 8 787

Fill in the pattern below

8 782 , 8 792 , 8 802 , _____ , _____

Fill in the pattern below

8 782 , 8 882 , _____ , _____ , 9 182 , _____

Compare using <, >, or =

8 782 8 795

5 315 8 782

8 782 3 346

8 325 8 782

8 237 8 782

8 782	+ 10	
8 782	+ 100	
8 782	+ 1000	
8 782	- 1000	
8 782	- 100	

Name: _____

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Place Value Quiz

Part 1

Fill in the Place Value Charts below

1) 2 236

2) 4 363

3) 4 392

Thou	Hun	Tens	Ones

Thou	Hun	Tens	Ones

Thou	Hun	Tens	Ones

Part 2

What place value is the underlined number?

1) 1 3 5 5

3) 4 1 3 5

4) 5 3 3 1

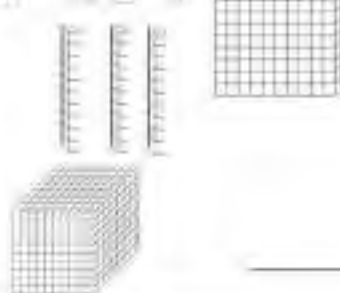
5) 8 6

6) 9 7 3 4

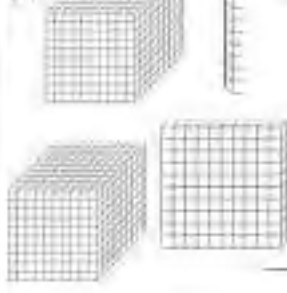
Part 3

How many blocks do you count?

1.



2.



Part 4

What is the standard form of the numbers below?

1) 2 000 + 200 + 20 + 1

2) 5 000 + 300 + 60 + 8

3) 9 000 + 200 + 4

Part 5

What is the expanded form of the numbers below?

1) 3 775

2) 2 593

3) 5 421

4) 6 309

Part 6

Standard form of the written words below

1) Three thousand and thirty-six

2) Four thousand one hundred four

Part 7

Write the written form of the numbers below

1) 3 234

2) 5 617

Part 8

Solve the riddles

- 1) Which number has: 4 thousands, 5 hundreds, 3 less tens than hundreds, and 7 more ones than tens?
- 2) Which number has 6 ones, 2 hundreds, half as many thousands as hundreds and twice as many tens as hundreds?

Comparing Numbers

6 235  9 2337 384  6 2991 248  1 248**Part 1**

Compare the following numbers

1) 6 85 _____ 7 09

2) 2 685 3 5103) 6 112 6 0944) 1 325 1 5

5) _____ 4 257

6) 3 199 4 6067) 3 382 3 3128) 7 583 7 59) 5 874 5 874**Part 2**

Write - Greater than, Equal to, Less than

1) 725 is _____ 442
Greater than2) 1 556 is _____
_____3) 4 814 is _____ 4 122
_____4) 3 572 is _____ 3 572
_____5) 7 235 is _____ 7 432
_____6) 4 514 is _____ 4 415

Activity – Number Line Leap Frog

Objective

What are we learning about?

To help students understand and practice ordering whole numbers up to 10,000 by placing them correctly on a number line.



Materials

What you will need for the activity.

- A roll of paper to create a number line
- Markers or crayons
- Small sticks
- Index cards with various numbers up to 10,000 written on them

Instructions

How you will complete the activity

1. Lay out the roll of paper on the floor in the classroom and draw a long number line across it. Mark the number line at even intervals with markers of 1,000 up to 10,000 to provide a reference for students.
2. Give each student an index card with a number written on it and have them place their number on a sticky note as well.
3. Have students come up one at a time to the number line and place their number on the line.
4. The student must decide where on the number line their number belongs and place their sticky note on the line accordingly.
5. Once a student places their sticky note, the rest of the class can agree or disagree. If there is a disagreement, the student must justify their placement to their peers.
6. After all the students have placed their numbers, review the sequence as a class and make any necessary adjustments together.
7. For the final challenge, shuffle the sticky notes and have the students place them in the correct order as quickly as possible.
8. Ask students to answer these questions: "Which number did you have? Why did you place it where you did? What did you notice about the numbers to your left and right?"

Name: _____

Numbers to 10 000

Cut out the numbers below. Give one to each student.

666

4256

8600

5567

8025

164

7993

3613

5488

2439

5947

3213

1691

1293

7352

1150

9253

5346

1019

4867

2930

9451

4096

9149

8278

4909

5606

PREVIEW

Comparing Numbers



Part 1 Write a number between 1 and 1000 that fits the description

1) Number greater than 415	2) Number less than 627
3) Number less than 294	4) Number equal to 84
5) Number greater than 7	6) Number less than 412
7) Number equal to _____	8) Number greater than 965


Part 2 Write a number between _____ and 10 000 that will make sense



1) $2\ 205 > \underline{\hspace{2cm}}$	2) $6\ 244 > \underline{\hspace{2cm}}$	3) $\underline{\hspace{2cm}} < 81$
4) $8\ 365 = \underline{\hspace{2cm}}$	5) $\underline{\hspace{2cm}} < 4\ 327$	6) $2\ 310 > \underline{\hspace{2cm}}$
7) $\underline{\hspace{2cm}} > 8\ 195$	8) $9\ 937 < \underline{\hspace{2cm}}$	9) $\underline{\hspace{2cm}} = 3\ 902$
10) $8\ 153 = \underline{\hspace{2cm}}$	11) $\underline{\hspace{2cm}} < 2\ 357$	12) $4\ 220 > \underline{\hspace{2cm}}$

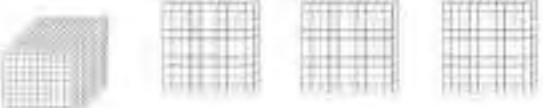
Comparing Base Ten Blocks



Questions



Compare the number of base ten blocks below


1.  


2.  

3.  

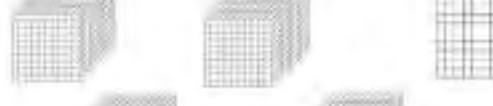
4.  



5.  


6.  

7.  

8.  

9.  

10.  

11.  

12.  

Ordering and Comparing Numbers Quiz

Part 1

Compare the following numbers

1) 325 3 000

2) 5 182 2 570

3) 7 125 7 394

4) 3 525 3 25

5) 2 362 2 365

6) 8 367 8 371

Part 2

Write Greater than, Less than

1) 615 is _____ 362 6 is _____ 4 852
 Greater than _____

3) 8 123 is _____ 9 432

4) _____ 841

Part 3

Order the numbers below from least to greatest

33, 45, 35, 18

_____, _____, _____, _____

425, 236, 235, 342

_____, _____, _____, _____

1 763, 6 753, 2 569, 3 104

_____, _____, _____, _____

1 237, 2 653, 1 342, 2 873

_____, _____, _____, _____

Part 4

Order the numbers below from greatest to least

23, 3, 9, 14, 20

120, 341, 146, 189, 211

134, 145, 110, 256, 230

2 945, 1 240, 1 543, 1 654

Part 5

Write a number between 1 and 1 000 that fits the description

1) Number greater than 627

2) Number less than 989

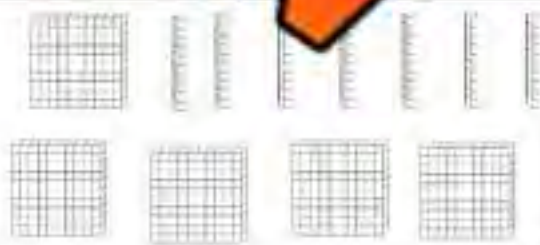
3) Number less than 410

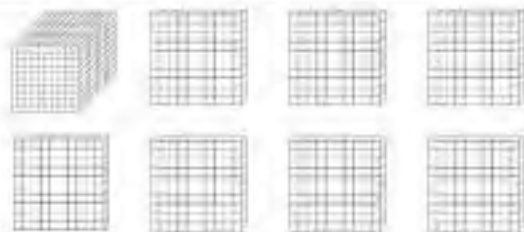
4) Number equal to 765

Part 6

Compare the number of base ten blocks below







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

$13 + 5 = \underline{\hspace{2cm}}$

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

$17 + 4 = \underline{\hspace{2cm}}$

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

$23 + 7 = \underline{\hspace{2cm}}$

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

$34 + 7 = \underline{\hspace{2cm}}$

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

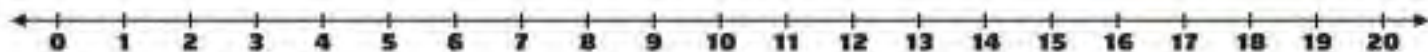
$64 + 4 = \underline{\hspace{2cm}}$

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

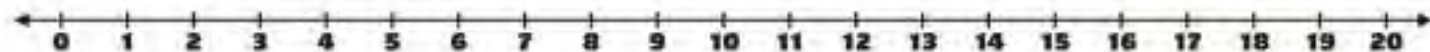
$83 + 8 = \underline{\hspace{2cm}}$

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

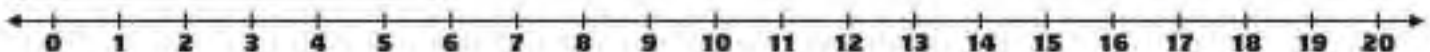
$7 + 9 = \underline{\hspace{2cm}}$



$11 + 6 = \underline{\hspace{2cm}}$



$7 + 13 = \underline{\hspace{2cm}}$



Mental Math Strategy – Making Tens

Directions

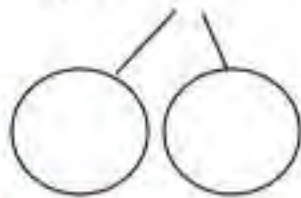
1. Create a ten by taking some from the other number.
2. Add the remaining amount.



1. $7 + 5$

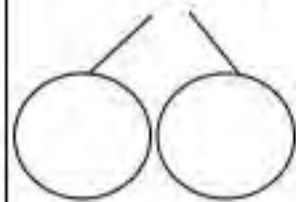
$10 + 2 = 12$

2) $18 + 6$



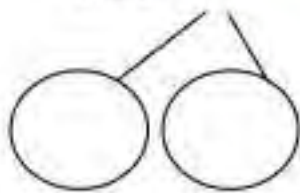
$\underline{\quad} = \underline{\quad}$

3) $25 + 17$



$\underline{\quad} + \underline{\quad} = \underline{\quad}$

4) $78 + 14$



$\underline{\quad} + \underline{\quad} = \underline{\quad}$

5) $28 + 17$



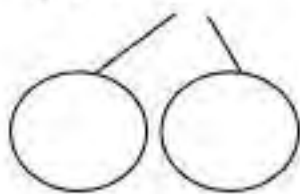
$\underline{\quad} + \underline{\quad} = \underline{\quad}$

6) $99 + 14$



$\underline{\quad} + \underline{\quad} = \underline{\quad}$

7) $128 + 53$



$\underline{\quad} + \underline{\quad} = \underline{\quad}$

8) $167 + 27$



$\underline{\quad} + \underline{\quad} = \underline{\quad}$

9) $238 + 144$



$\underline{\quad} + \underline{\quad} = \underline{\quad}$

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.

PREVIEW

$$46 + 45$$

$$45 + 45 = 90$$

$$90 + 1 = 91$$

$$50 + 51$$

$$76 + 75$$

$$99 + 101$$

$$149 + 152$$

$$123 + 123$$

$$248 + 253$$

$$499 + 502$$

$$749 + 748$$

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

$135 + 219$

$200 = 300$

$10 = 40$

$300 + 54$

$124 + 56$

$146 + 27$

$216 + 188$

$168 + 254$

92

$167 + 173$

$355 + 262$

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

$124 + 125$

$100 = 224$

$25 = 244$

$25 = 244$

$134 + 145$

$243 + 23$

$264 + 228$

$334 + 358$

252

$357 + 553$

$664 + 267$

Adding Money

$322 + 431 = 753$

Questions

Count the money below and decide which amount is larger

_____ = _____

_____ + _____ = _____

_____ + _____ = _____

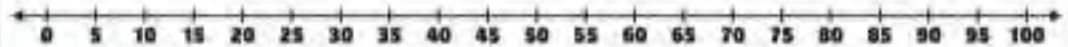
_____ + _____ = _____

Number Line Addition

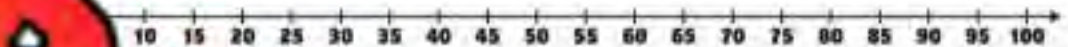
Questions

Use the number line to add the numbers below

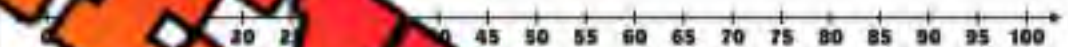
1) $15 + 25 = 40$



2) $35 + \quad = \quad$



3) $70 + 25 = \quad$



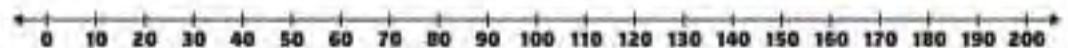
4) $60 + 35 = \quad$



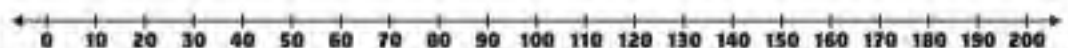
5) $110 + 85 = \quad$



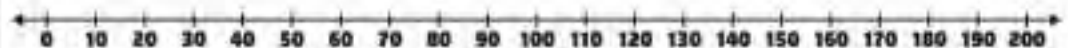
6) $70 + 85 = \quad$



7) $95 + 65 = \quad$



8) $135 + 45 = \quad$



Rounding Numbers to the Nearest 10 – Number Line

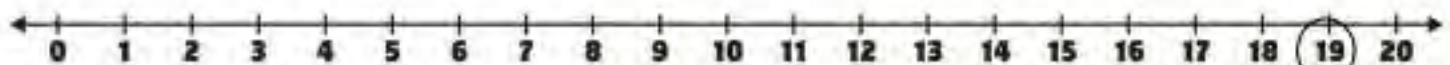
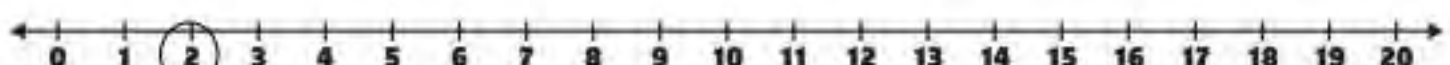
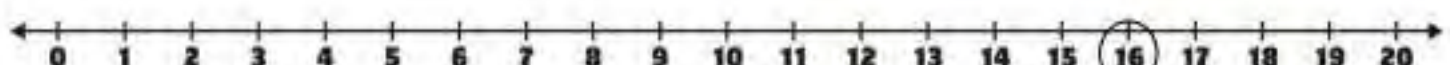
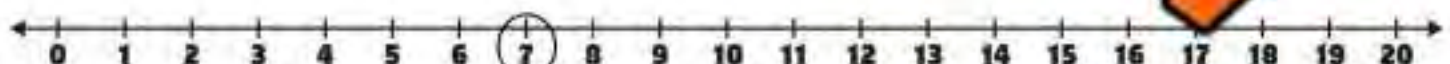
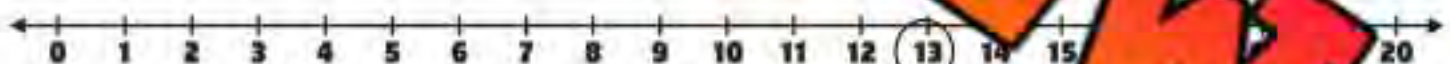
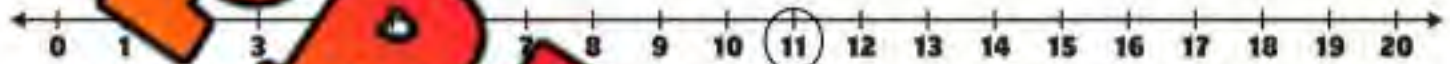
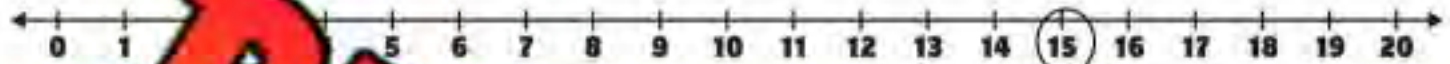
Round Down

Round Up

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

Questions

Round the number to the nearest ten (circle the new number)



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

$42 \rightarrow 40$

$155 \rightarrow 160$

Rounding to the nearest 100

$242 \rightarrow 200$

$389 \rightarrow 400$

Part 1 Round the numbers to the nearest 10

1) $42 \rightarrow$ _____	2) $56 \rightarrow$ _____	3) $31 \rightarrow$ _____
4) $85 \rightarrow$ _____	5) $12 \rightarrow$ _____	6) $74 \rightarrow$ _____
7) $257 \rightarrow$ _____	8) $144 \rightarrow$ _____	9) $378 \rightarrow$ _____
10) $873 \rightarrow$ _____	11) $923 \rightarrow$ _____	12) $12 \rightarrow$ _____

Part 2 Round the numbers to the nearest 100

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

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 $1\ 864 \rightarrow 2\ 000$
------------------------------------	--	---

Question _____ Round the numbers three different ways

#	Hundred	Hundred	Thousand
1	$2\ 137 \rightarrow$ _____	$2\ 137 \rightarrow 2\ 100$	$2\ 137 \rightarrow 2\ 000$
2	$6\ 136 \rightarrow$ _____		$6\ 136 \rightarrow$ _____
3	$2\ 041 \rightarrow$ _____	$2\ 041 \rightarrow$ _____	$2\ 041 \rightarrow$ _____
4	$8\ 355 \rightarrow$ _____	$8\ 355 \rightarrow$ _____	
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	$9\ 921 \rightarrow$ _____	$9\ 921 \rightarrow$ _____	$9\ 921 \rightarrow$ _____

Adding – No Regrouping**Questions**

Use the standard algorithm to solve the addition problems below

	Hun.	Tens	Ones
			3
+		5	5
<hr/>			

	Hun.	Tens	Ones
		1	3
+		3	6
			5
<hr/>			

	Hun.	Tens	Ones
		2	4
+		5	3
			2
<hr/>			

	Hun.	Tens	Ones
		3	4
+		3	4
			2
<hr/>			

	Hun.	Tens	Ones
		6	8
+		3	9
			0
<hr/>			

	Hun.	Tens	Ones
		3	4
+		3	4
			1
<hr/>			
			6

	Thou.	Hun.	Tens	Ones
		5	2	3
+		3	5	3
				5
<hr/>				

	Thou.	Hun.	Tens	Ones
		7	5	6
+		2	4	2
				7
<hr/>				

	Thou.	Hun.	Tens	Ones
		4	5	3
+		2	3	6
				4
<hr/>				

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) $\begin{array}{r} 258 \\ + 241 \\ \hline \end{array}$	7) $\begin{array}{r} 267 \\ + 217 \\ \hline \end{array}$	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) $\begin{array}{r} 5\ 136 \\ + 3\ 650 \\ \hline \end{array}$	13) $\begin{array}{r} 762 \\ + 1\ 252 \\ \hline \end{array}$	14) $\begin{array}{r} 252 \\ + 5\ 362 \\ \hline \end{array}$	15) $\begin{array}{r} 4\ 614 \\ + 5\ 362 \\ \hline \end{array}$

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?



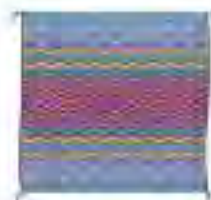
2) Spencer had \$4 123 in his bank account. He won \$1 247 in a raffle. How much does he have now?



3) Rob loves to drink juice. Today he drank 1 642 mL of orange juice and 3 358 mL of apple juice. How much total juice did Rob drink?






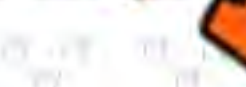








4) Sofia knitted a blanket with 4 452 cm of blue yarn and 3 514 cm of purple yarn. How many centimetres of total yarn did Sofia use to make the blanket?



Regrouping – Which is Equal?

Questions

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

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

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) $\begin{array}{r} 35 \\ + 17 \\ \hline \end{array}$	4) $\begin{array}{r} 17 \\ + 24 \\ \hline \end{array}$	5) $\begin{array}{r} 55 \\ + 35 \\ \hline \end{array}$
6) $\begin{array}{r} 76 \\ + 253 \\ \hline \end{array}$	7) $\begin{array}{r} 76 \\ + 53 \\ \hline \end{array}$	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) $\begin{array}{r} 42 \\ + 7\ 232 \\ \hline \end{array}$	14) $\begin{array}{r} 8\ 252 \\ + 7 \\ \hline \end{array}$	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 driver drove 2 388km 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 ate 4 448 calories at a basketball tournament, so she expended a lot of energy. So, she ate 4 448 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?



Exit Cards

Cut Out

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

Name: _____

Solve the problems below

a)

b) Riley read 452 pages in a book last month. This month, he read 298 pages. How many pages has Riley read in total?

Name: _____

Solve the problems below

a)
$$\begin{array}{r} 4\ 327 \\ + 5\ 574 \\ \hline \end{array}$$

b) Riley read 452 pages in a book last month. This month, he read 298 pages. How many pages has Riley read in total?

Name: _____

Solve the problems below

a)
$$\begin{array}{r} 4\ 327 \\ + 5\ 574 \\ \hline \end{array}$$

b) Riley read 452 pages in a book last month. This month, he read 298 pages. How many pages has Riley read in total?

Name: _____

Solve the problem

a)
$$\begin{array}{r} 4\ 327 \\ + 5\ 574 \\ \hline \end{array}$$

b) Riley read 452 pages in a book last month. This month, he read 298 pages. How many pages has Riley read 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



$18 - 5 = \underline{\quad}$

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

$22 - 4 = \underline{\quad}$

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

$27 - 7 = \underline{\quad}$

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

$43 - 9 = \underline{\quad}$

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

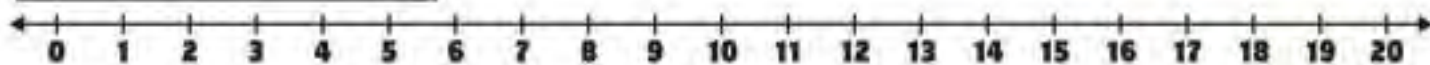
$72 - 4 = \underline{\quad}$

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

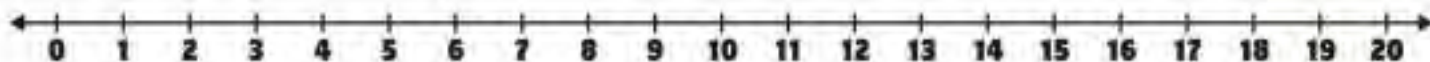
$93 - 6 = \underline{\quad}$

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

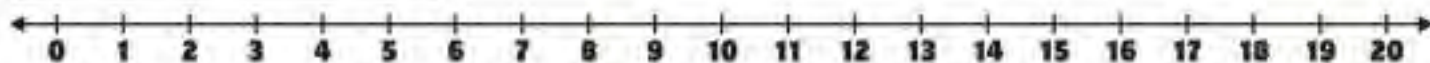
$17 - 6 = \underline{\quad}$



$15 - 4 = \underline{\quad}$



$20 - 8 = \underline{\quad}$

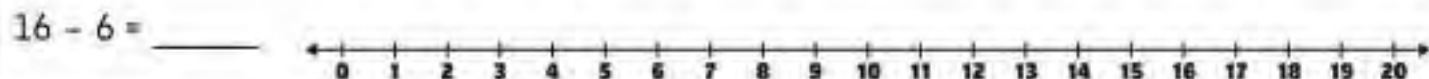
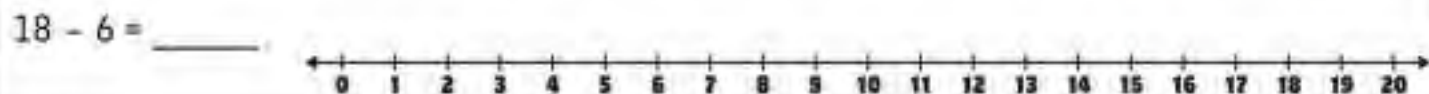
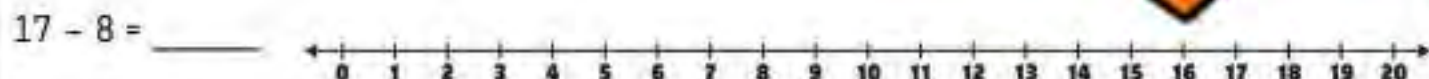
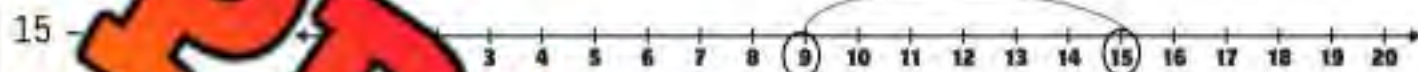


Mental Math – Counting Up (Up to 20)

Lesson – Subtraction is simply finding the difference between two numbers

Directions

1. Start with the lower number on the number line
2. Count up to the other number and circle where you land
3. The difference is how many times you counted up



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

$124 - 104$



$256 - 235$

$243 - 225$

$254 - 240$

$377 - 354$

382

$783 - 713$

$852 - 822$

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



$124 - 115$

$124 - 100 = 24$

$24 - 10 = 14$

14

$256 - 145$

$243 - 134$

$264 - 142$

$357 - 234$

$256 - 145$

$753 - 323$

$873 - 562$

PREVIEW

Subtracting – Borrowing

Questions

Use the standard algorithm to solve the subtraction problems below

	Tens	Ones
	4	4
-		
<hr/>		

	Tens	Ones
	4	1
-	1	4
<hr/>		

	Tens	Ones
	5	5
-	2	6
<hr/>		

	Tens	Ones
	7	6
-	3	8
<hr/>		

	Hun.	Tens	Ones
	6	8	3
-	1	5	6
<hr/>			

	Hun.	Tens	Ones
		5	
-	2	2	
<hr/>			

	Hun.	Tens	Ones
	4	4	2
-		3	5
<hr/>			

	Thou.	Hun.	Tens	Ones
	2	4	4	5
-	1	2	6	7
<hr/>				

	Thou.	Hun.	Tens	Ones
	3	7	4	9
-	2	3	8	9
<hr/>				

	Thou.	Hun.	Tens	Ones
	5	9	3	4
-	3	7	6	9
<hr/>				

Subtraction – Borrowing

Questions

Use the standard algorithm to solve the subtraction problems below

1)
$$\begin{array}{r} 26 \\ - 17 \\ \hline \end{array}$$

2)
$$\begin{array}{r} 35 \\ - 17 \\ \hline \end{array}$$

3)
$$\begin{array}{r} 43 \\ - 28 \\ \hline \end{array}$$

4)
$$\begin{array}{r} 51 \\ - 18 \\ \hline \end{array}$$

5)
$$\begin{array}{r} 571 \\ - 438 \\ \hline \end{array}$$

7)
$$\begin{array}{r} 615 \\ - 334 \\ \hline \end{array}$$

8)
$$\begin{array}{r} 837 \\ - 128 \\ \hline \end{array}$$

9)
$$\begin{array}{r} 1\ 318 \\ - 1\ 226 \\ \hline \end{array}$$

10)
$$\begin{array}{r} 4\ 556 \\ - 3\ 438 \\ \hline \end{array}$$

11)
$$\begin{array}{r} 5\ 467 \\ - 3\ 789 \\ \hline \end{array}$$

12)
$$\begin{array}{r} 5\ 135 \\ - 3\ 556 \\ \hline \end{array}$$

Word Problems

Answer the questions below.

1) Lisa ran 9 000 meters in a marathon. After a while, she had only 5 678 meters left to run. How many meters had she run already?

2) A candy shop had 8,560 pieces of candy. After a big sale, there were 3,286 pieces left. How many pieces of candy were sold?

Subtraction Word Problems – Borrowing

Questions

Solve the problems below

1) Nicole had \$8 485 to spend on a car. She picked one that cost her \$7 296. How much money does she have leftover?



2) Mike is rowing in a race every day. After 20 minutes of the race, Mike had gone 4 265m. How much more does he need to row?



3) Travis and Kerry had a contest to see who could run the furthest in an hour. Kerry ran 9 642m and Travis ran 7 259m. How much further did Kerry run?



4) Jen is filling up her pool with water. The pool can hold 8 530 liters of water. She has poured 3 783L of water into the pool already. How much more water does she need to pour into the pool to fill it up?



Subtraction Questions**Questions**

Solve the problems below

1) $3\,156 - 2\,142$

2) $5\,378 - 3\,185$

3) $7\,364 - 3\,543$

4) $6\,872 - 3\,295$

5) $7\,348 - 2\,564$

6) $7 - 1$

7) $9\,682 - 7\,759$

8) $9\,006 - 7\,536$

PREVIEW

Exit Cards

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

Name: _____

1) $4\,136 - 1\,162$

- 2) A local library had 8,345 books in their collection. After a big sale, they sold 5,678 books to make space for new titles. How many books are left in the library's collection now?

Name: _____

1) $4\,136 - 1\,162$

- 2) A local library had 8,345 books in their collection. After a big sale, they sold 5,678 books to make space for new titles. How many books are left in the library's collection now?

Name: _____

1) $4\,136 - 1\,162$

- 2) A local library had 8,345 books in their collection. After a big sale, they sold 5,678 books to make space for new titles. How many books are left in the library's collection now?

Name: _____

1) $4\,136 - 1\,162$

- 2) A local library had 8,345 books in their collection. After a big sale, they sold 5,678 books to make space for new titles. How many books are left in the library's collection now?

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?



Ben also got rid of some rocks that were not valuable. How many rocks were valuable?

2) Adam and Lindsay went to the mall to buy 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 230km to Ottawa on one weekend and then 240km to Toronto the next weekend. How many more km can she drive?



Unit Quiz - Adding and Subtracting**Part 1****Adding**

	Thou.	Hun.	Tens	Ones
	5	8	3	5
+	3	8	3	3
<hr/>				

	Thou.	Hun.	Tens	Ones
	7	5	6	1
+	2	4	2	7
<hr/>				

	Thou.	Hun.	Tens	Ones
	3	4	6	7
+	3	5	2	5
<hr/>				

$$\begin{array}{r} 432 \\ + 726 \\ \hline \end{array}$$

15

$$\begin{array}{r} 3224 \\ + 2530 \\ \hline \end{array}$$

Part 2**Solve**

$2\,143 + 3\,424$

$1\,653 + 4\,845$

Part 3

Subtracting

	Thou.	Hun.	Tens	Ones
	6	5	5	2
-	1			2

	Thou.	Hun.	Tens	Ones
	8	6	5	6
-	3	3	3	0

	Thou.	Hun.	Tens	Ones
	5	4	5	5
-	4	3	3	3

$$\begin{array}{r} 393 \\ - 176 \\ \hline \end{array}$$

$$\begin{array}{r} 4758 \\ - 3355 \\ \hline \end{array}$$

Part 4

Solve

$$7685 - 2142$$

$$8376 - 5184$$

1) Suzanne is a raspberry picker at a farm. She picked 2 653 raspberries last week and 4 765 raspberries this week. How many raspberries did she pick in total in the last 2 weeks?



2) There are 60 minutes in a day. How many minutes are there in 2 days?



3) Lindsay had \$7 493 to spend on a boat. She spent \$6 357 on buying a boat for \$6 357. How much money does she have left?



4) Skyler is driving 2 538 kilometres across the country. She has driven 1 341 kilometres already. How many more kilometres does she need to drive?



Multiplication – Repeated Addition

Part 1

Fill in the blanks below

1) $2 + 2 + 2 + 2 = 8$

$4 \times 2 = 8$

_____ groups of 2

2) $5 + 5 + 5 = \underline{\quad}$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

_____ groups of _____

3) $\underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

_____ groups of _____

4) $8 + 8 + 8 = \underline{\quad}$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

_____ groups of _____

5) $3 + 3 + 3 + 3 + 3 = \underline{\quad}$ 6) $1 + 1 + 1 + 1 + 1 + 1 + 1 = \underline{\quad}$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$ $\underline{\quad} \times \underline{\quad} = \underline{\quad}$

_____ groups of _____ _____ groups of _____

7) $6 + 6 + 6 + 6 = \underline{\quad}$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

_____ groups of _____

Part 2

Answer the question below

Billy cuts his neighbours grass each week for 6 weeks. He makes 10 dollars each time he cuts the grass. How much money does he make in the 6 weeks?

Addition Sentence - $\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

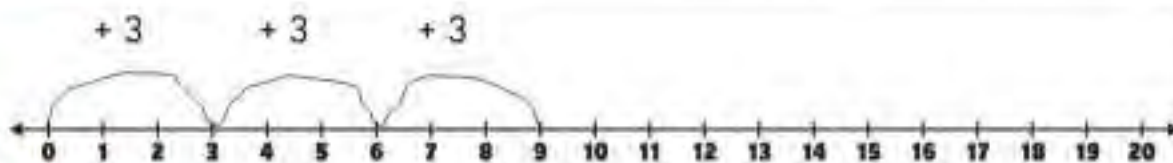
Multiplication Equation - $\underline{\quad} \times \underline{\quad} = \underline{\quad}$

Therefore, Billy _____

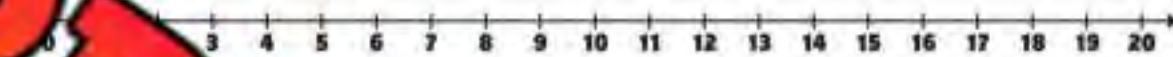
Number Line Multiplication – Repeated Addition**Questions**

Fill in the blanks below

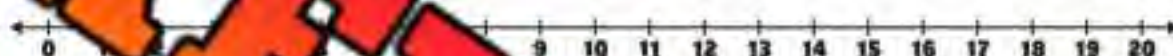
1) $3 \times 3 = 9$



2) $6 \times 3 =$ _____



3) $5 \times 4 =$ _____



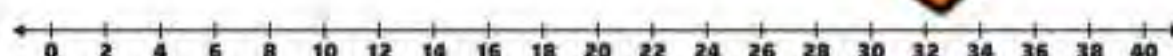
4) $7 \times 2 =$ _____



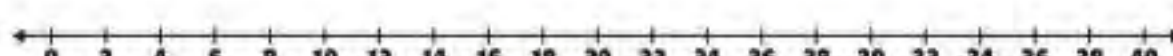
5) $2 \times 9 =$ _____



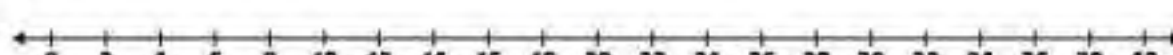
6) $5 \times 7 =$ _____



7) $9 \times 4 =$ _____



8) $6 \times 6 =$ _____



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) Pencil Packs: Liam 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 will Liam have?	
3) Baking Cookies: Emma is baking cookies. She bakes 7 cookies in one batch, 7 more cookies in a second batch, and 7 more 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?	

Multiplication – Arrays

Part 1

Write the equations for the arrays below



_____ x _____ = _____

_____ x _____ = _____



_____ x _____ = _____

_____ x _____ = _____

_____ x _____ = _____

Part 2

Draw an array based on the equation

$5 \times 4 = \underline{\quad}$

$8 \times 3 = \underline{\quad}$

$2 \times 7 = \underline{\quad}$

$5 \times 7 = \underline{\quad}$

$9 \times 3 = \underline{\quad}$

$8 \times 4 = \underline{\quad}$

Name: _____

Multiplication Chart – Patterns



Questions

Fill in the multiplication table below

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

PREVIEW

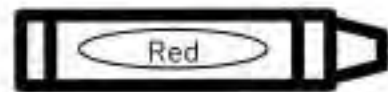
Multiplication Chart – Patterns

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

Questions

Follow the instructions below

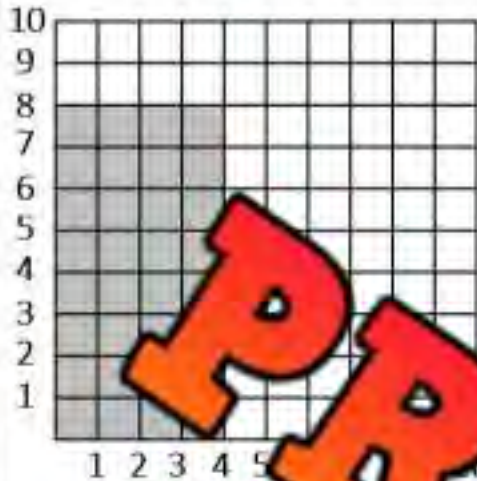
- 1) Count by 1's and colour the numbers
- 2) Count by 3's and colour the numbers
- 3) Count by 5's and colour the numbers
- 4) Count by 7's and colour the numbers



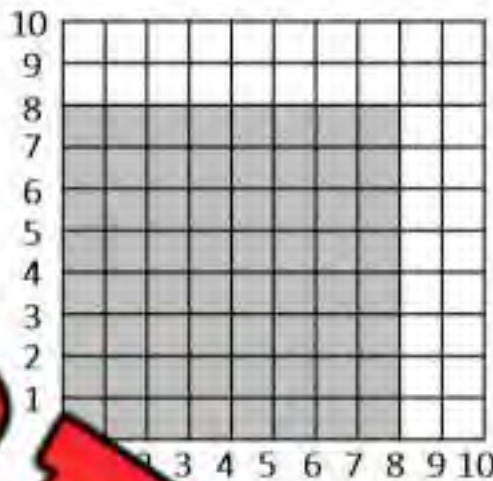
Multiplication - Arrays

Questions

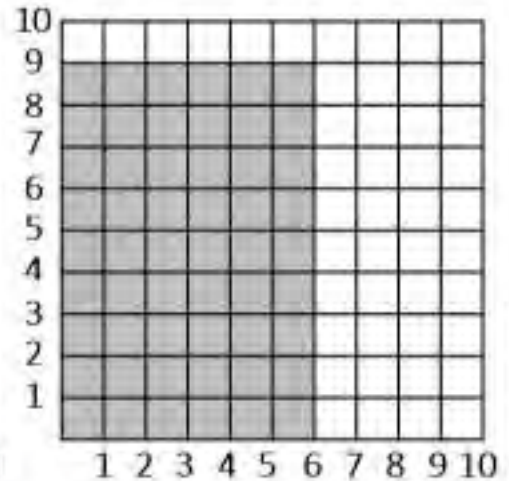
How much is shaded in? Answer the questions below



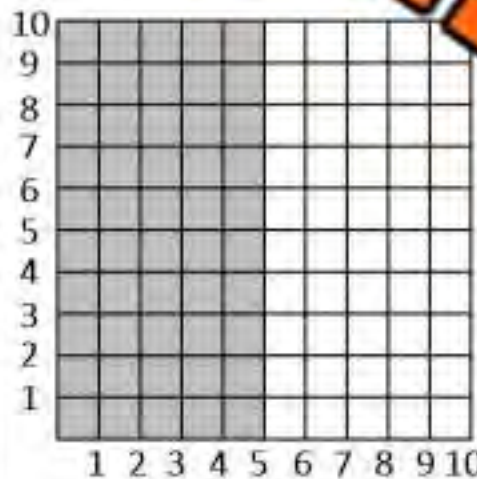
$8 \times 4 = \underline{\quad}$



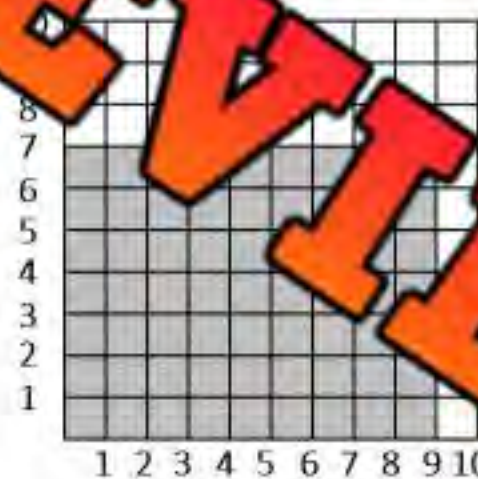
$7 \times 6 = \underline{\quad}$



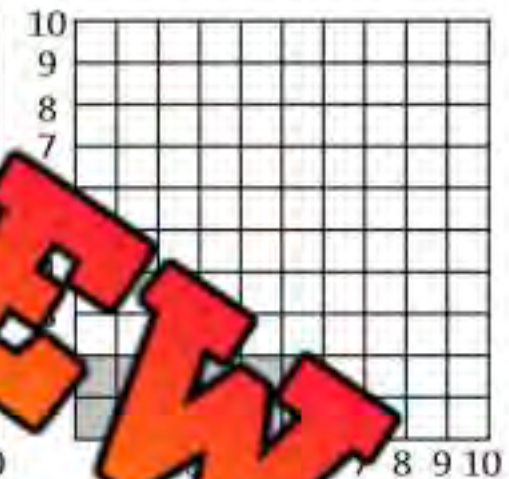
$9 \times 6 = \underline{\quad}$



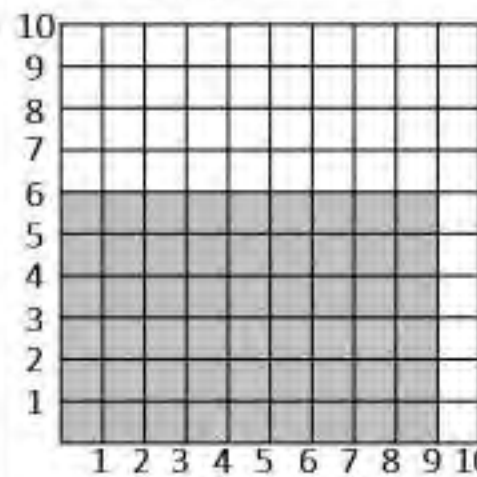
$10 \times 5 = \underline{\quad}$



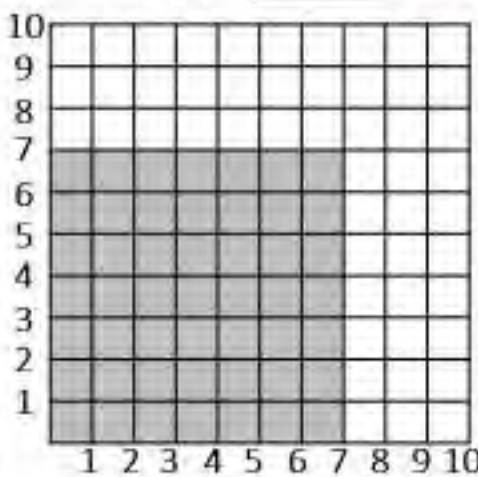
$7 \times 9 = \underline{\quad}$



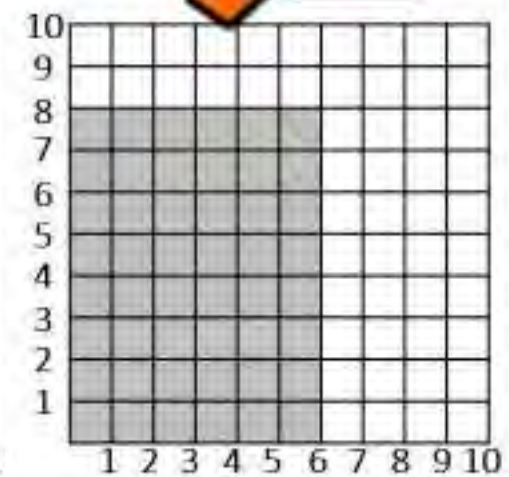
$2 \times 10 = \underline{\quad}$



$6 \times 9 = \underline{\quad}$



$7 \times 7 = \underline{\quad}$

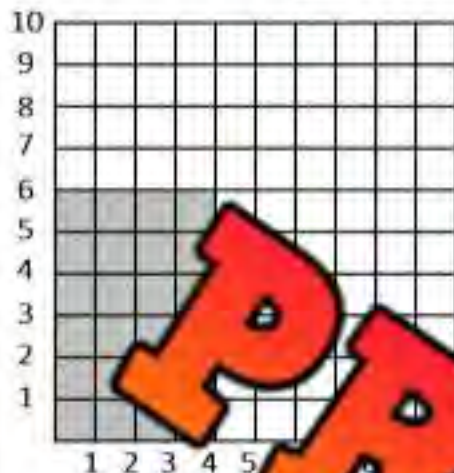


$8 \times 6 = \underline{\quad}$

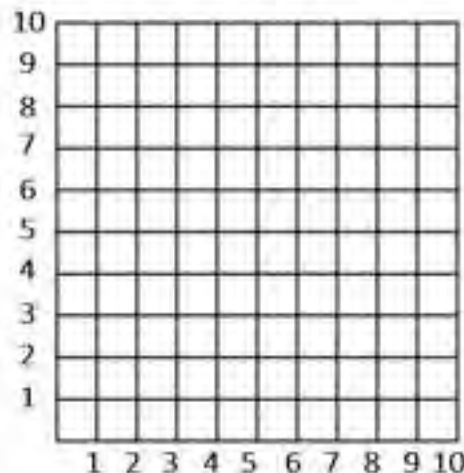
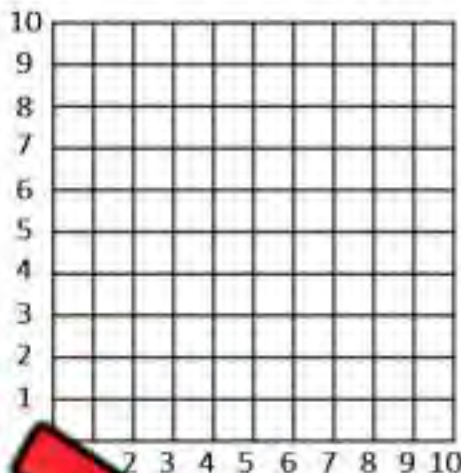
Multiplication - Arrays

Questions

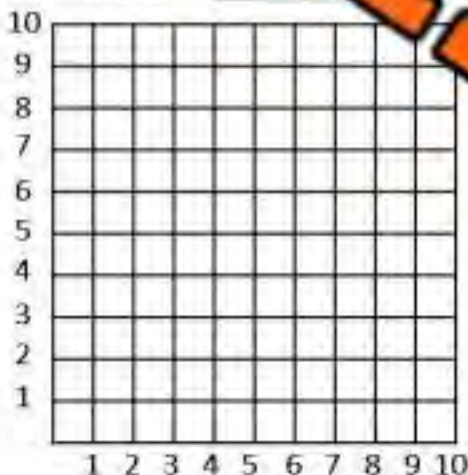
Shade in the arrays using the table. Answer the questions below



$6 \times 4 = \underline{\hspace{2cm}}$



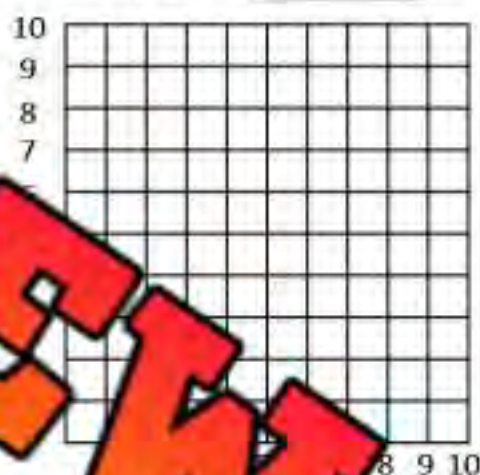
$7 \times 8 = \underline{\hspace{2cm}}$



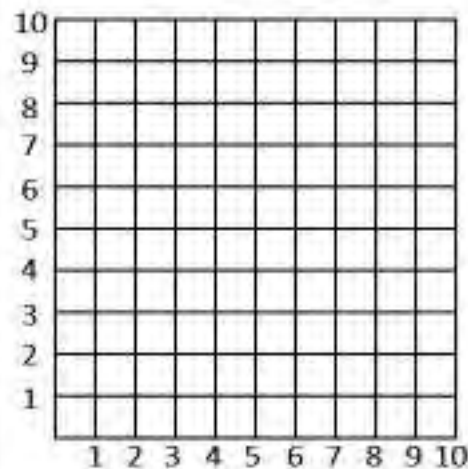
$4 \times 7 = \underline{\hspace{2cm}}$



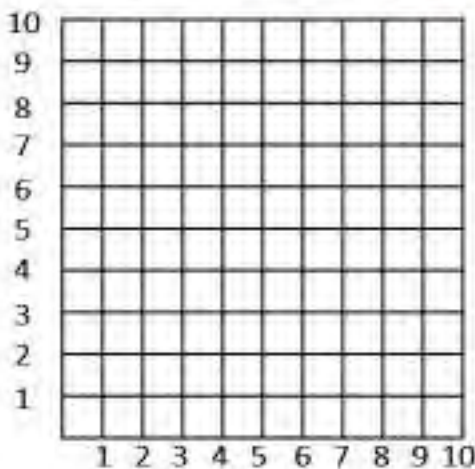
$9 \times 3 = \underline{\hspace{2cm}}$



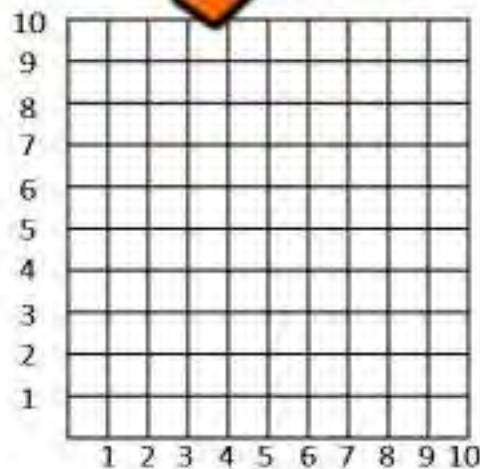
$7 \times \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$



$6 \times 5 = \underline{\hspace{2cm}}$



$6 \times 6 = \underline{\hspace{2cm}}$



$9 \times 5 = \underline{\hspace{2cm}}$

Activity – The Multiplication Magic Show

Objective

What are we learning about?

To deepen students' understanding of the concepts behind multiplying by 0 and 1 through an engaging and interactive 'magic' show, where students not only learn but also perform 'magic tricks'.



Materials

What you will need for the activity.

- Magic wands (e.g., sticks or even pencils).
- Multiplication flash cards featuring problems that result in multiplying by 0 and 1.
- A 'magic' hat (e.g., a flash card).
- A large whiteboard for students to draw and explain the multiplication problems.
- Small rewards or stickers for students who successfully perform their 'magic'.

Instructions

How you will complete the activity.

1. Begin the show by explaining that today's magic is about the special powers of multiplying by 0 and 1.
2. Each student takes turns being the magician. They draw a flash card, a magic hat and present the multiplication problem to the class.
3. Before revealing the answer, the student magician explains the 'magic' behind multiplying by 0 or 1 (e.g., "Anything multiplied by 1 remains the same! It's like magic!").
4. The magician then reveals the answer, demonstrating the 'magic' of multiplication.
5. The class can then discuss why this 'magic' happens, reinforcing the concept with examples.
6. Every student magician gets a small reward or sticker for their performance.
7. Conclude the magic show with a discussion and recap of what was learned about multiplying by 0 and 1.

Numbers

Cut out the numbers below. Put them in a hat for students to draw.

7×1

0×8

1×9

4×1

0×5

1×3

1×1

1×7

0×2

1×1

5×1

0×6

9×1

1×2

3×0

1×6

0×7

1×5

2×1

0×9

8×0

1×4

0×8

1×10

7×0

0×1

2×0

1×11

0×12

1×12

3×1

0×10

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



PREVIEW

 $8 \times$ 9×3 6×5 7×6 9×5 4×9 8×9

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

$$\begin{array}{r} 16 \times 4 \\ 10 \times 4 \text{ and } 6 \times 4 \\ \downarrow \qquad \qquad \downarrow \\ 40 \qquad \qquad 24 \\ \swarrow \qquad \searrow \\ 64 \end{array}$$



PREVIEW

16×7

15×4

15×9

18×7

16×6

14×6

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

16×6

16×10

19×4

17×4

Exit Cards

Cut Out

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

Name: _____

Multiply these numbers by Doubling
and Halving

a) 17×8

b) 17×4

Name: _____

Multiply these numbers by Doubling
and Halving

a) 12×8

b) 17×4

Name: _____

Multiply these numbers by Doubling
and Halving

a) 12×8

b) 17×4

Name: _____

Multiply these numbers by Doubling
and Halving

a) 12×8

b) 17×4

Multiplying by Multiples of Ten

Directions:

- When multiplying by 10, move the decimal place one place to the right (add a zero)
- When multiplying by another multiple of ten, multiply the number with the first number of the multiple of ten and then add a zero.
 - For example: $6 \times 40 = 240$ (6×4 and then add a 0)

	x 20	x 50
	$1 \times 20 = \underline{\quad}$	$1 \times 50 = \underline{\quad}$
$2 \times 10 = \underline{\quad}$	$2 \times 20 = \underline{\quad}$	$2 \times 50 = \underline{\quad}$
$3 \times 10 = \underline{\quad}$	$3 \times 20 = \underline{\quad}$	$3 \times 50 = \underline{\quad}$
$4 \times 10 = \underline{\quad}$	$4 \times 20 = \underline{\quad}$	$4 \times 50 = \underline{\quad}$
$5 \times 10 = \underline{\quad}$	$5 \times 20 = \underline{\quad}$	$5 \times 50 = \underline{\quad}$
$6 \times 10 = \underline{\quad}$	$6 \times 20 = \underline{\quad}$	$6 \times 50 = \underline{\quad}$
$7 \times 10 = \underline{\quad}$	$7 \times 20 = \underline{\quad}$	$7 \times 50 = \underline{\quad}$
$8 \times 10 = \underline{\quad}$	$8 \times 20 = \underline{\quad}$	$8 \times 50 = \underline{\quad}$
$9 \times 10 = \underline{\quad}$	$9 \times 20 = \underline{\quad}$	$9 \times 50 = \underline{\quad}$
$10 \times 10 = \underline{\quad}$	$10 \times 20 = \underline{\quad}$	$10 \times 50 = \underline{\quad}$

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

	x 30
2	
5	
7	
3	
4	
6	
8	

	x 50
2	
6	
3	
7	
4	
5	
9	

	x 700
2	
5	
7	
3	
4	
6	
8	

	x 400
2	
6	
7	
4	
3	
5	
9	

	x 50
2	
6	
3	
7	
4	
5	
9	

	x 700
2	
6	
3	
7	
4	
5	
9	

Multiplication Drills – 3s and 4s**Questions**

Solve as many problems as you can before the time runs out!

36

$$\begin{array}{r} 3 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 0 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 4 \\ \hline \end{array}$$

Multiplication – 3 x 1 Digits**Questions**

Use the standard algorithm to solve the multiplication problems below

1)			
	2	3	
x			3
<hr/>			

2)			
	6	3	1
x			3
<hr/>			

3)			
	2	4	7
x			6
<hr/>			

4)			
	3	7	2
x			8
<hr/>			

5)			
	7	3	6
x			3
<hr/>			

6)			
	5	5	6
x			2
<hr/>			

7)			
	3	4	6
x			6
<hr/>			

8)			
	7	5	4
x			7
<hr/>			

9)			
	6	7	3
x			5
<hr/>			

10)			
	8	4	2
x			2
<hr/>			

11)			
	6	7	9
x			3
<hr/>			

12)			
	7	1	3
x			6
<hr/>			

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)
$$\begin{array}{r} 326 \\ \times 7 \\ \hline \end{array}$$

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)
$$\begin{array}{r} 356 \\ \times 8 \\ \hline \end{array}$$

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)
$$\begin{array}{r} 137 \\ \times 4 \\ \hline \end{array}$$
 244
$$\begin{array}{r} 244 \\ \times 1 \\ \hline \end{array}$$

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)
$$\begin{array}{r} 986 \\ \times 5 \\ \hline \end{array}$$

25)
$$\begin{array}{r} 795 \\ \times 0 \\ \hline \end{array}$$

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. He 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?



Multiplication – 3-Digits by 1-Digit

Step 1: Setup up the Area Model

$$235 \times 3 = \underline{\hspace{2cm}}$$

200 30 5

3			
---	--	--	--

Step 2: Multiply

$$235 \times 3 = \underline{\hspace{2cm}}$$

200 30 5

3	200 x 3 600	30 x 3 90	5 x 3 15
---	----------------	--------------	-------------

Step 3: Add

$$235 \times 3 = 705$$

200 30 5

3	600	90	15
---	-----	----	----

$$600 + 90 + 15 = 705$$

Question: Use an area model to solve the multiplication problems below

1) $452 \times 3 = \underline{\hspace{2cm}}$

--	--	--

2) $626 \times 2 = \underline{\hspace{2cm}}$

--	--	--

3) $347 \times 4 = \underline{\hspace{2cm}}$

--	--	--

4) $512 \times 6 = \underline{\hspace{2cm}}$

--	--	--

5) $312 \times 7 = \underline{\hspace{2cm}}$

--	--	--

6) $682 \times 8 = \underline{\hspace{2cm}}$

--	--	--

Multiplication Word Problems

Questions

Solve the problems below

1) Ivy sold 262 lemonades from her lemonade stand last month. She sells her lemonade for \$3 each. How much money did she make last month?



2) Kelly works at a call center where she has to talk to 5 people to try to sell a product. Each phone call she makes is an average of 30 seconds long. If she makes 375 calls a shift, how long is she on the phone?



3) A bag of candy has 213 candies in it. Each candy is 6 grams. How many grams is the bag of candy?



Exit Cards

Cut Out

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

Name: _____

Solve the problem below:

a) Lisa has 215 boxes of chocolates. Each box contains 8 chocolates. How many chocolates does she have in total?

b) If each chocolate is worth \$2, how much money does Lisa have?

Name: _____

Solve the problem below:

a) Lisa has 215 boxes of chocolates. Each box contains 8 chocolates. How many chocolates does she have in total?

b) If each chocolate is worth \$2, how much money does Lisa have?

Name: _____

Solve the problem below:

a) Lisa has 215 boxes of chocolates. Each box contains 8 chocolates. How many chocolates does she have in total?

b) If each chocolate is worth \$2, how much money does Lisa have?

Name: _____

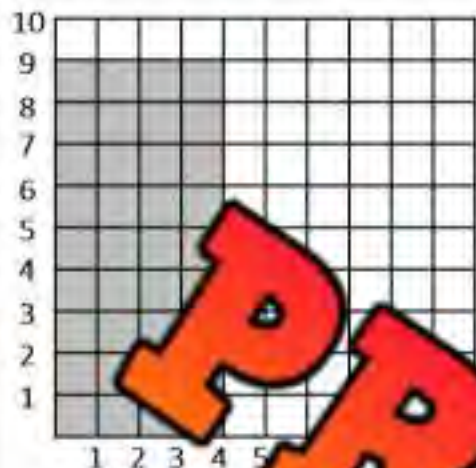
Solve the problem below:

a) Lisa has 215 boxes of chocolates. Each box contains 8 chocolates. How many chocolates does she have in total?

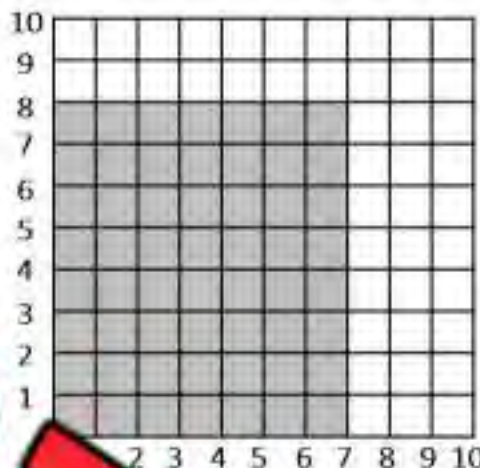
b) If each chocolate is worth \$2, how much money does Lisa have?

Division - Arrays**Questions**

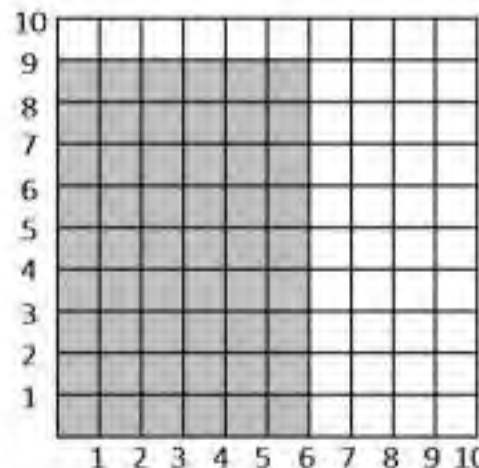
How is the shaded in area divided?



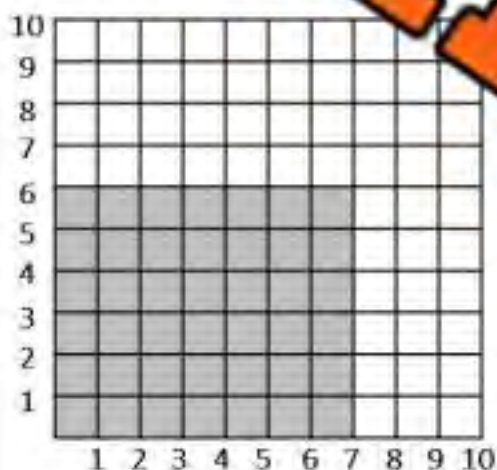
$36 \div 4 = \underline{\quad}$



$42 \div 7 = \underline{\quad}$



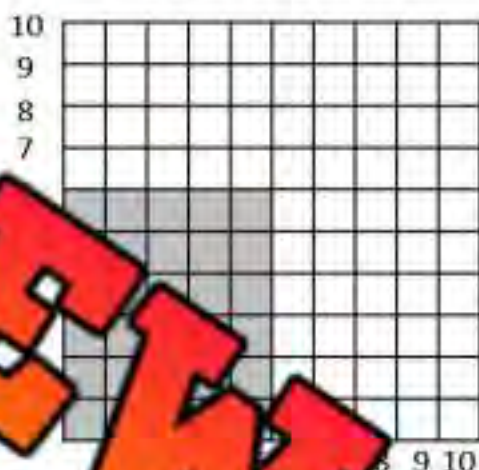
$54 \div 6 = \underline{\quad}$



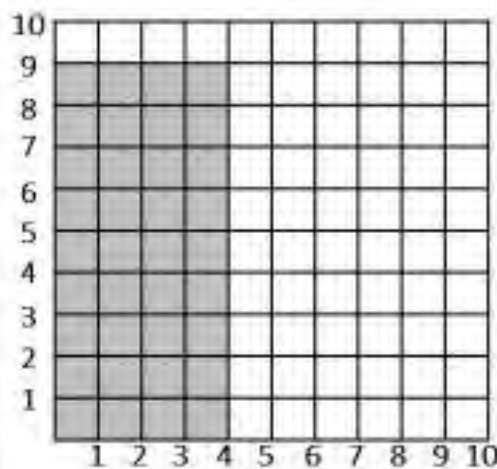
$42 \div 7 = \underline{\quad}$



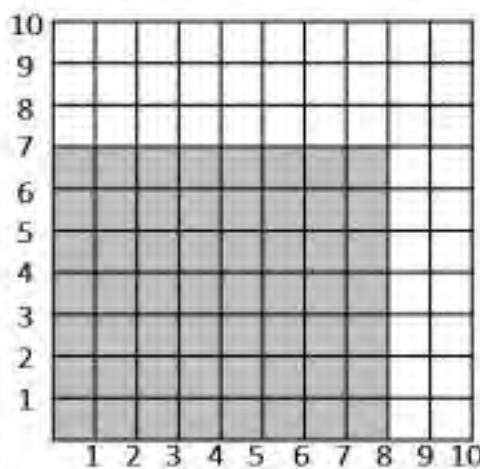
$81 \div 9 = \underline{\quad}$



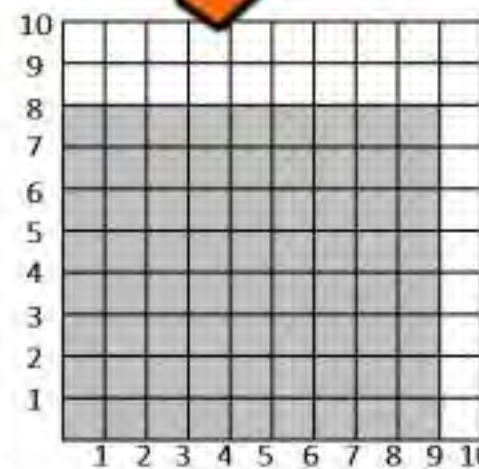
$50 \div 10 = \underline{\quad}$



$36 \div 4 = \underline{\quad}$



$56 \div 8 = \underline{\quad}$

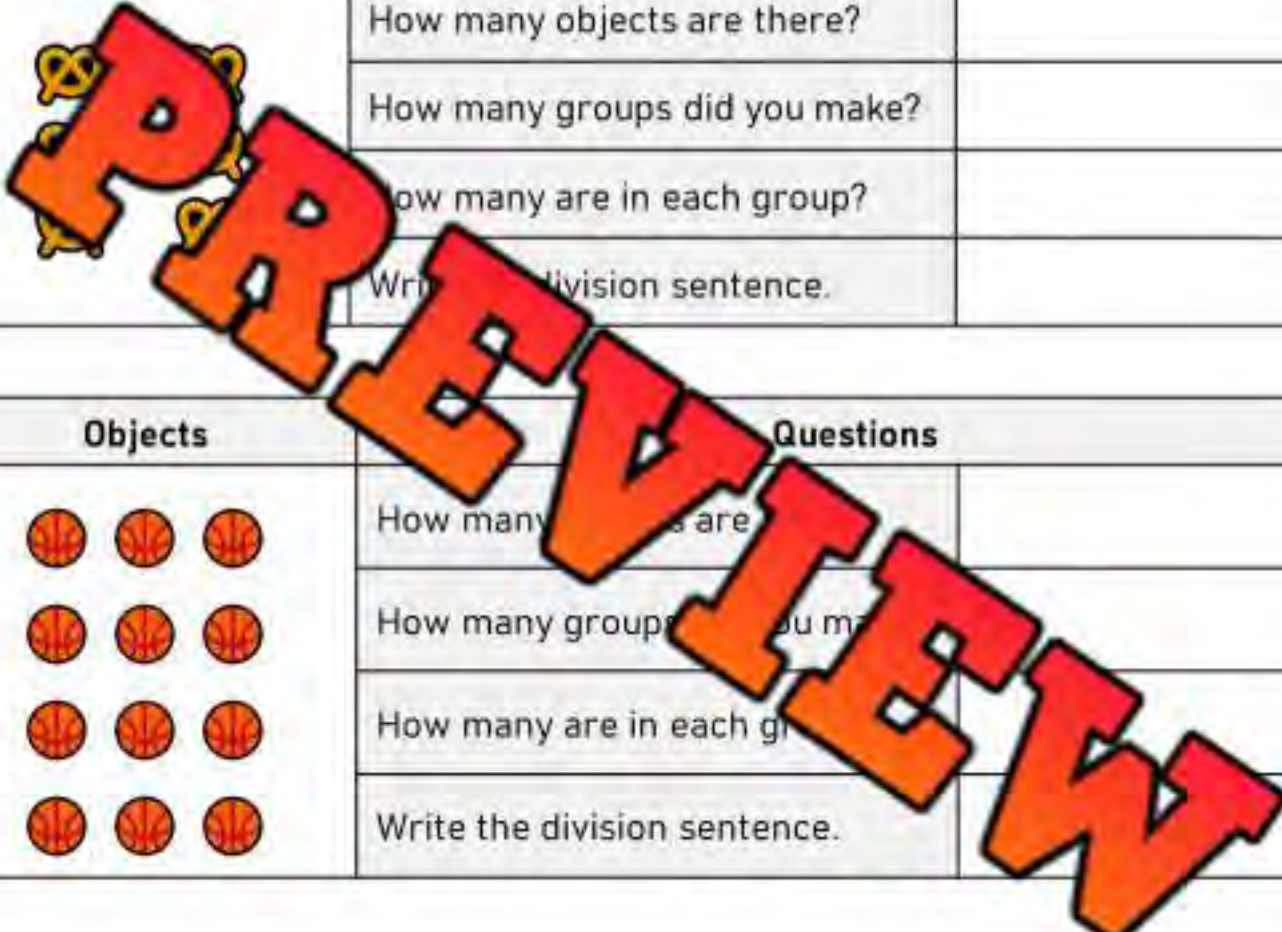



$72 \div 9 = \underline{\quad}$


Division – Equal Sharing

Questions

If you were sharing the objects below, how would you split them up equally? Answer the questions below.

Objects	Questions	
	How many objects are there?	
	How many groups did you make?	
	How many are in each group?	
	Write the division sentence.	

Objects	Questions	
	How many objects are there?	
	How many groups did you make?	
	How many are in each group?	
	Write the division sentence.	

Objects	Questions	
	How many objects are there?	
	How many groups did you make?	
	How many are in each group?	
	Write the division sentence.	

Division – Equal Sharing

Questions

Friends are sharing the treats below. Answer the questions.



How many donuts are there?

How many groups do you need to share the donuts?

How many donuts will be in each group?

Write the division sentence.

How many donuts will each person get?



How many cupcakes are there?

How many groups do you need to share the cupcakes?

How many cupcakes will be in each group?

Write the division sentence.

How many cupcakes will each person get?

Division – Equal Sharing

Questions

Friends are sharing the treats below. Answer the questions.



How many pieces of sushi are there?

How many groups do you need to share the sushi?

How many pieces will be in each group?

Write the division sentence.

How many pieces of sushi will each person get?

Are there any pieces of sushi left?



How many tacos are there?

How many groups do you need to share the tacos?

How many tacos will be in each group?

Write the division sentence.

How many tacos will each person get?

Are there any tacos left over?

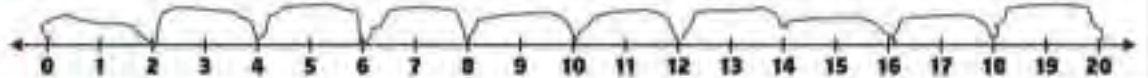
Number Line Division – Repeated Subtraction

Questions

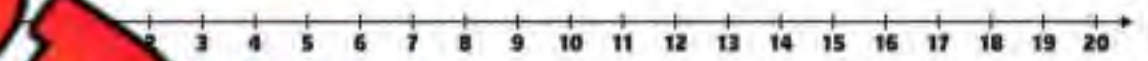
Use repeated subtraction to find the answer

Start at the larger number and subtract the smaller number until you reach zero. Your answer is how many times you subtracted.

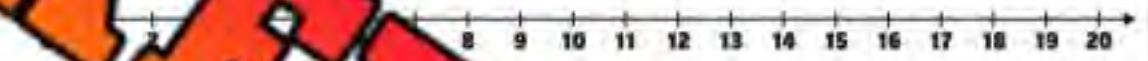
1) $20 \div 2 = 10$



2) $15 \div 3 = \underline{\quad}$



3) $10 \div 5 = \underline{\quad}$



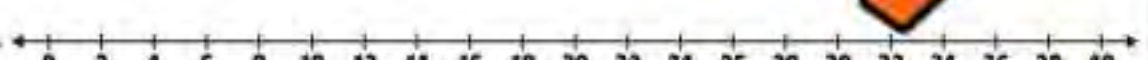
4) $18 \div 6 = \underline{\quad}$



5) $12 \div 3 = \underline{\quad}$



6) $30 \div 10 = \underline{\quad}$



7) $32 \div 4 = \underline{\quad}$



8) $36 \div 6 = \underline{\quad}$



Mental Math – Division – Skip Counting

Directions

1. Count up by the smaller number to the larger number
2. 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



$$70 \div 5$$

$$64 \div 4$$

$$72 \div 6$$

$$95 \div 5$$

$$98 \div 7$$

$$96 \div 8$$

$$84 \div 6$$

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

$$\begin{aligned} 144 \div 6 &= 24 \\ 60 \div 6 &= 10 \\ 60 \div 6 &= 10 \\ 24 \div 6 &= 4 \end{aligned}$$



$$52 \div 4$$

$$138 \div 6$$

5

$$96 \div 4$$

$$161 \div 7$$

$$184 \div 8$$

$$162 \div 6$$

Division Practice – 5 and 6**Questions**

Solve as many problems as you can before the time runs out!

36

$$\begin{array}{r} 25 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 42 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 60 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 36 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 20 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 45 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 25 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 36 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 42 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 35 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 45 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 48 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \\ \div 5 \\ \hline \end{array}$$

Exit Cards

Cut Out

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

Name: _____

Find out how many times you can divide the bigger number by the smaller number

a)

$$7 \overline{) 40}$$

b)

$$9 \overline{) 77}$$

Name: _____

Find out how many times you can divide the bigger number by the smaller number

a)

$$7 \overline{) 40}$$

b)

$$9 \overline{) 77}$$

Name: _____

Find out how many times you can divide the bigger number by the smaller number

a)

$$7 \overline{) 40}$$

b)

$$9 \overline{) 77}$$

Name: _____

Find out how many times you can divide the bigger number by the smaller number

a)

$$7 \overline{) 40}$$

b)

$$9 \overline{) 77}$$

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) $48 \div 4$

48							

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			

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 120 minutes for a test she has tomorrow. She has studied the same amount for the last 3 days. How much did she study for each day?



3) Owen collected 146 candies on Halloween night. He put the candies into 4 groups so he could share them with his 2 brothers and his sister. 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?



Unit Quiz - Multiplication and Division**Part 1****Solve**

13×6

16×8

$95 \div 7$

	7	5
x		7

	7	8
x		3

	8	4	2
x			2

$6 \overline{) 24}$

$2 \overline{) 38}$

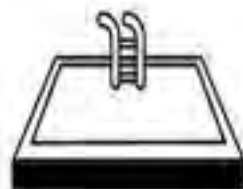
$3 \overline{) 63}$

$5 \overline{) 97}$

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) Every day of the year (365 days), Joey ate 7 pieces of fruit. How many pieces of fruit did Joey eat in a year?



3) Mrs. Wilson made 84 cookies. 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 7 times last summer. How much did he spend on gas?



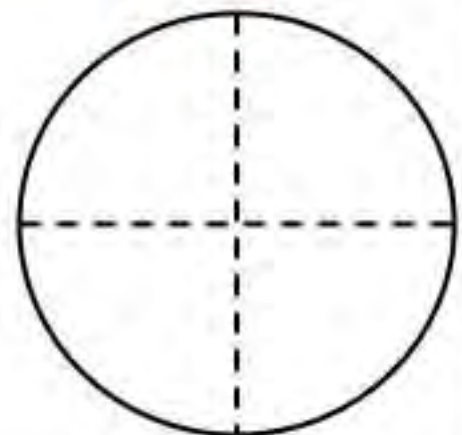
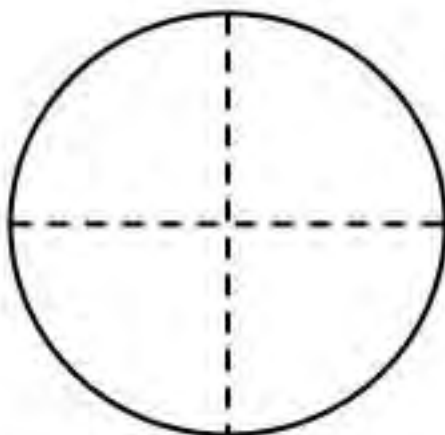
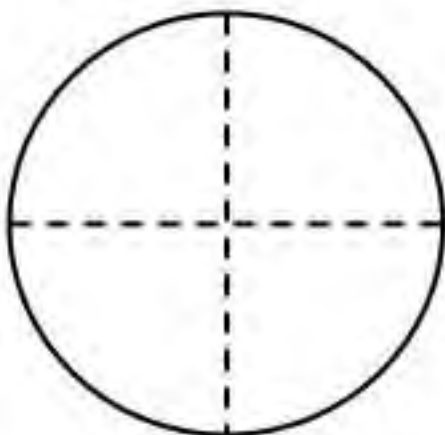
Bonus) If he split the cost of gas with two other friends, how much would each friend owe? (leave the answer in dollars and include any remainder).

Fair Sharing – Pizza

Alex and Julia are really hungry tonight. They ordered 3 pizzas to share. Each pizza is cut up into 4 slices. How much pizza will Alex and Julia get?



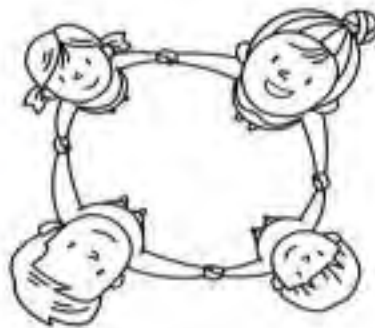
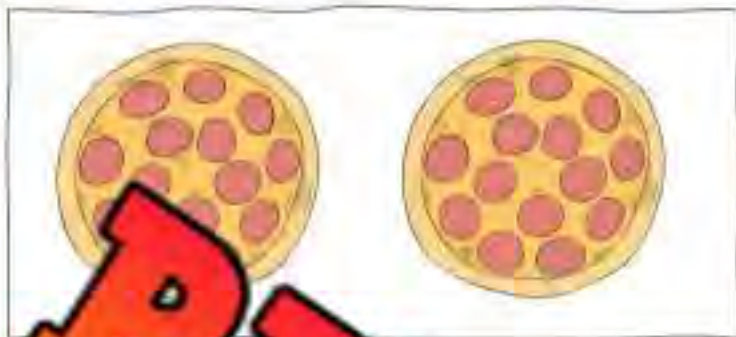
	<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="border-bottom: 1px solid black; width: 80%;"></div> </div>		
# whole pizzas	Alex's Slices	Julia's Slices	# whole pizzas
	Slices in one pizza (whole)		Slices in one pizza (whole)



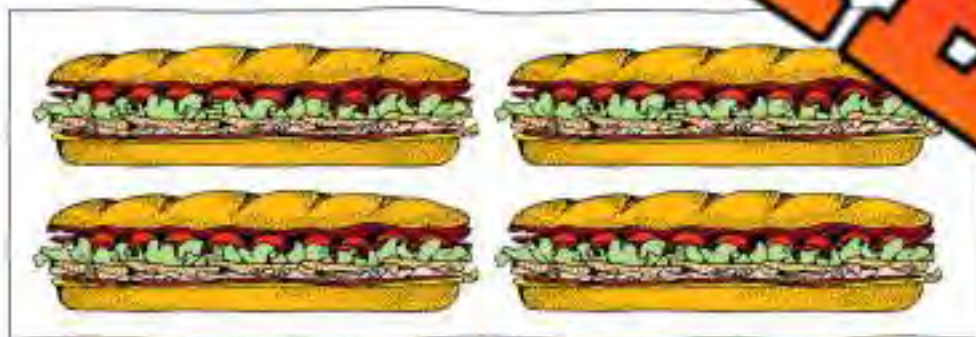
Fractions Representing Quotients

Questions

Friends are sharing the food below. Answer the questions.



How many whole pizzas are there?	
How many people are sharing the pizzas?	
Write the fraction that represents the division sentence.	
Write the division sentence.	
How much pizza will each person get?	



How many whole subs are there?	
How many people are sharing the two subs?	
Write the fraction that represents the division sentence.	
Write the division sentence.	
How much sub will each person get?	

Benchmark Fractions

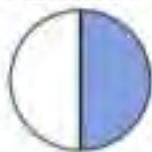
We use benchmark fractions to estimate parts of a whole. The benchmark fractions that are most popular are: zero, half, whole, quarter, three-quarters.



Zero



One-Quarter



Half



Three-Quarter



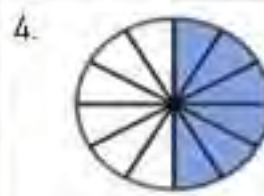
Whole

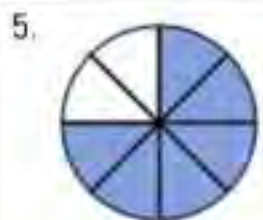
Part 1 Write the fraction and then label it using the benchmarks above

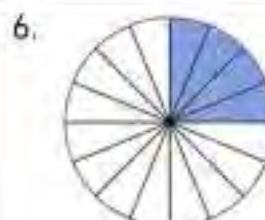
















Part 2







Write as many fractions of each benchmark as you can

Zero	One-Quarter	Half	Three-Quarters	Whole
$\frac{0}{1}$	$\frac{3}{12}$	$\frac{8}{16}$	$\frac{9}{12}$	$\frac{1}{1}$

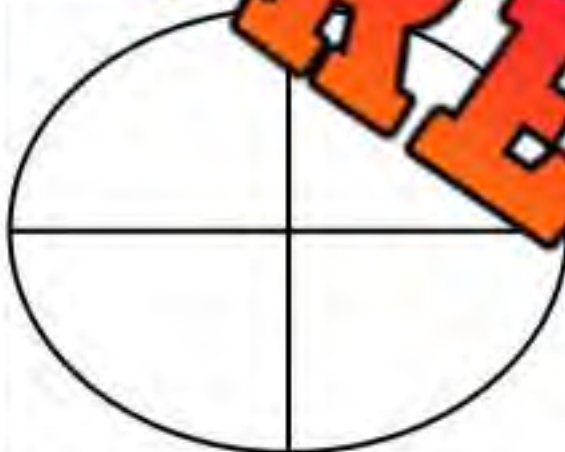
Pizza Fractions

Questions

Draw the pizzas below based on the customer's requests

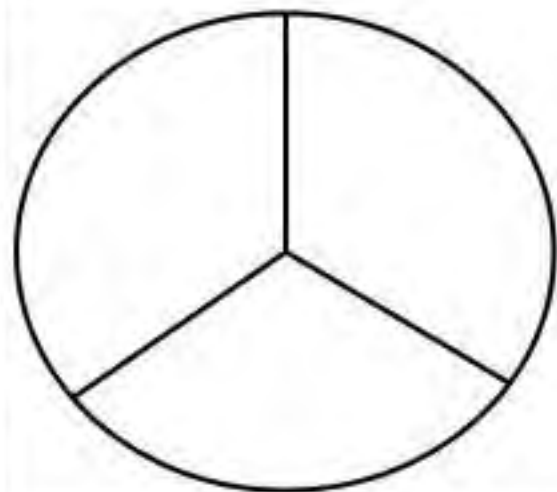
Pepperoni	Bacon	Olives	Pineapple	Onion	Mushroom
					

1) The pizza has pepperoni, and one-fourth has pineapple


 Pepperoni

 Pineapple

2) Two-thirds of the pizza has bacon and one-third has olives








 Olives

 Bacon

Pizza Fractions

Questions

Draw the pizzas below based on the customer's requests

Pepperoni	Bacon	Olives	Pineapple	Onion	Mushroom
					

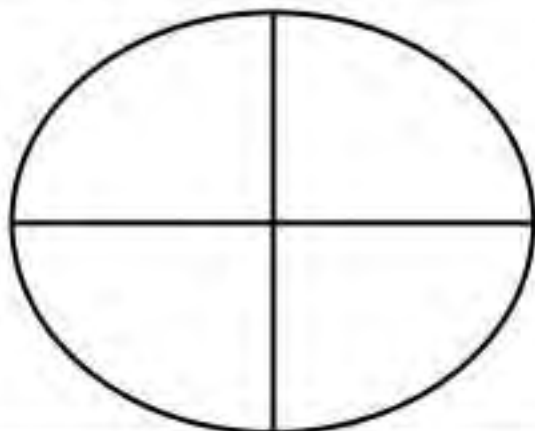
1) One-half pepperoni, one-fourth bacon and one-half mushroom.



2) One-fourth bacon and pepperoni and three-fourths olives and onions.



3) One-half olives and onion, one-fourth bacon and one-fourth mushroom.









4) One-third pineapple, one-third olives and onion, and one-third pepperoni and mushroom.



Pizza Fractions – My Favourite (Thirds)

Questions

Create a pizza that has 2 different combinations of toppings

Pepperoni	Bacon	Olives	Pineapple	Onion	Mushroom
					

What's on the pizza?

PREVIEW



Topping

Topping







Topping

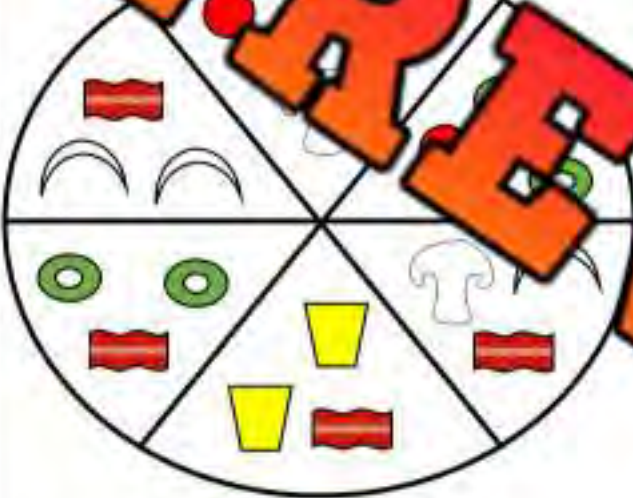
Topping

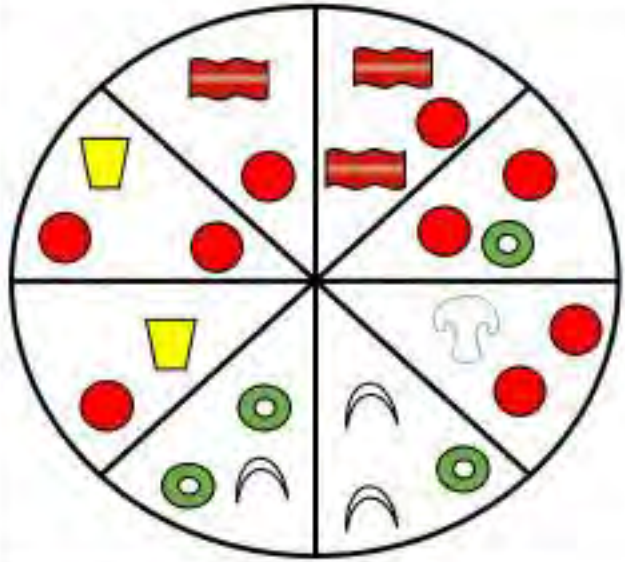
Pizza Fractions

Directions

Write the fractions for the pizzas below

Pepperoni	Bacon	Olives	Pineapple	Onion	Mushroom
					

	What fraction of the pizza has...	Fraction
	Pepperoni	
	Olives	
	Onion	
	Pineapple	
	Bacon	
	Mushroom	

	What fraction of the pizza has...	Fraction
	Pepperoni	
	Olives	
	Onion	
	Pineapple	
	Bacon	
	Mushroom	

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 $<$ $>$ $=$

$\frac{2}{5}$ <input type="text"/>	$\frac{6}{8}$ <input type="text"/>	$\frac{5}{8}$ <input type="text"/>	$\frac{2}{7}$ <input type="text"/>	$\frac{3}{7}$ <input type="text"/>	$\frac{6}{10}$ <input type="text"/>	$\frac{5}{10}$ <input type="text"/>
$\frac{5}{5}$ <input type="text"/>	$\frac{4}{9}$ <input type="text"/>	$\frac{4}{9}$ <input type="text"/>	$\frac{5}{7}$ <input type="text"/>	$\frac{4}{7}$ <input type="text"/>	$\frac{7}{9}$ <input type="text"/>	$\frac{7}{9}$ <input type="text"/>
$\frac{2}{2}$ <input type="text"/>	$\frac{1}{2}$ <input type="text"/>	$\frac{4}{6}$ <input type="text"/>	$\frac{5}{6}$ <input type="text"/>	$\frac{4}{5}$ <input type="text"/>	$\frac{2}{4}$ <input type="text"/>	$\frac{4}{4}$ <input type="text"/>

Part 2 Put the fractions in order from least to greatest.

$\frac{2}{10}$	$\frac{3}{10}$	$\frac{5}{10}$	$\frac{4}{10}$	$\frac{1}{10}$	$\frac{10}{10}$		
$\frac{2}{9}$	$\frac{3}{9}$	$\frac{5}{9}$	$\frac{1}{9}$	$\frac{9}{9}$	$\frac{8}{9}$	$\frac{7}{9}$	$\frac{4}{9}$

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.

Exit Cards

Cut Out

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

Name: _____

Put the fractions in order from least to greatest

$$\frac{3}{7} \quad \frac{5}{7} \quad \frac{1}{7} \quad \frac{0}{7}$$

Name: _____

Put the fractions in order from least to greatest

$$\frac{3}{7} \quad \frac{5}{7} \quad \frac{1}{7} \quad \frac{0}{7}$$

Name: _____

Put the fractions in order from least to greatest

$$\frac{3}{7} \quad \frac{5}{7} \quad \frac{1}{7} \quad \frac{0}{7}$$

Name: _____

Put the fractions in order from least to greatest

$$\frac{3}{7} \quad \frac{5}{7} \quad \frac{1}{7} \quad \frac{0}{7}$$

Same Numerator/Different Denominator

If fractions have the same numerator, they have the same number of equal parts. If the denominator is different, the fractions have a different number of total parts. Check out the pizzas below that have the same numerators but different denominators.


 $\frac{4}{8}$

The whole pizza is cut into 8 pieces. 4 slices have been shaded in.


 $\frac{4}{6}$

The whole pizza is cut into 6 pieces. 4 slices have been shaded in.

If you would rather have $\frac{4}{6}$ slices of pizza, than $\frac{4}{8}$. Therefore, $\frac{4}{6}$ is bigger than $\frac{4}{8}$. In this example, the whole is the same size. This means the pizza is the same size. We can compare fractions that have the same numerator if the whole is the same size.

Question

Write the fraction and which one is bigger

1)



3)



5)



4)



6)



Same Numerator/Different Denominator

When comparing fractions with the same numerator, we can look at the denominator to know which is bigger. The fraction with the bigger denominator is smaller. This is because the whole has less equal parts.



Part 1 Compare the fractions using $<$ $>$ $=$

1) $\frac{2}{4}$ <input type="checkbox"/> $\frac{2}{5}$	2) $\frac{5}{4}$ <input type="checkbox"/> $\frac{5}{5}$	3) $\frac{3}{5}$ <input type="checkbox"/> $\frac{3}{7}$	4) $\frac{6}{10}$ <input type="checkbox"/> $\frac{6}{12}$
5) $\frac{3}{8}$ <input type="checkbox"/> $\frac{3}{5}$	6) $\frac{4}{9}$ <input type="checkbox"/> $\frac{4}{6}$	7) $\frac{5}{9}$ <input type="checkbox"/> $\frac{5}{7}$	8) $\frac{7}{8}$ <input type="checkbox"/> $\frac{7}{9}$
9) $\frac{8}{10}$ <input type="checkbox"/> $\frac{8}{12}$	10) $\frac{5}{8}$ <input type="checkbox"/> $\frac{5}{10}$	11) $\frac{2}{12}$ <input type="checkbox"/> $\frac{2}{9}$	12) $\frac{2}{12}$ <input type="checkbox"/> $\frac{2}{5}$

Part 2 Put the fractions in order from least to greatest

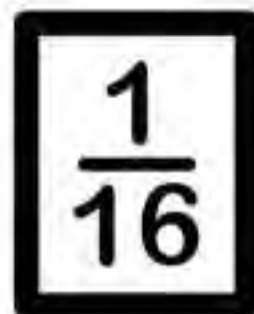
$\frac{4}{4}$ $\frac{4}{8}$ $\frac{4}{9}$ $\frac{4}{5}$ $\frac{4}{10}$ $\frac{4}{6}$ $\frac{4}{7}$ $\frac{4}{11}$

$\frac{5}{7}$ $\frac{5}{8}$ $\frac{5}{6}$ $\frac{5}{9}$ $\frac{5}{10}$ $\frac{5}{11}$ $\frac{5}{5}$ $\frac{5}{12}$

Activity – Fraction Race to the Finish

Objective What are we learning about?

To help students visually compare and order fractions through a creative and interactive game.



Materials What you will need for the activity.

- 1) A long strip of paper or a whiteboard.
- 2) Colored markers (different colours).
- 3) Fraction cards (with fractions written on them such as $\frac{2}{4}$, $\frac{1}{4}$, $\frac{3}{4}$, etc.).
- 4) A ruler or measuring tape.

Instructions How to complete the activity

- 1) Print off the number line on the next page.
- 2) Divide into Groups: Organize the class into small groups, each consisting of eight students.
- 3) Distribute Fraction Cards: Give each group a set of fraction cards (include fractions between 0 and 1).
- 4) Individual Fraction Selection: Each student in the group selects a fraction card from their set.
- 5) Place Fractions on Number Line: All students simultaneously place their chosen fraction card at the appropriate spot on their group's number line between 0 and 1. Encourage discussion within groups to reach a consensus on the placement.
- 6) Group Review: Once all cards are placed, each group takes turns presenting their number line to the class, explaining their reasoning for the placement of each fraction.
- 7) Class Consolidation: After each group has presented, conduct a whole-class activity. Draw a new, large number line and have each group place their fraction cards on this communal line in the same order as in their group activity. This allows for comparison and further discussion of the different fractions and their relative sizes.

Fraction Cards

Cut out the fraction cards and hand them to each group

$1/4$

$1/2$

$3/10$

$3/5$

$1/10$

$1/5$

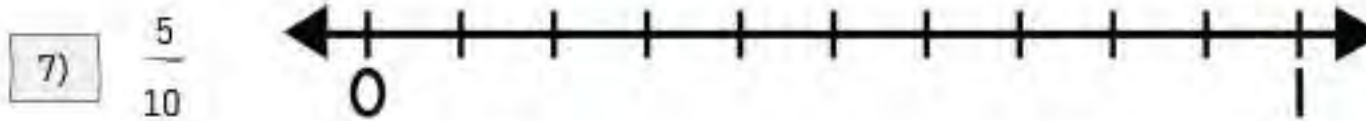
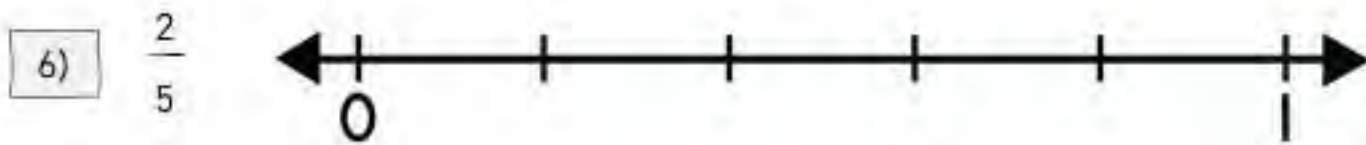
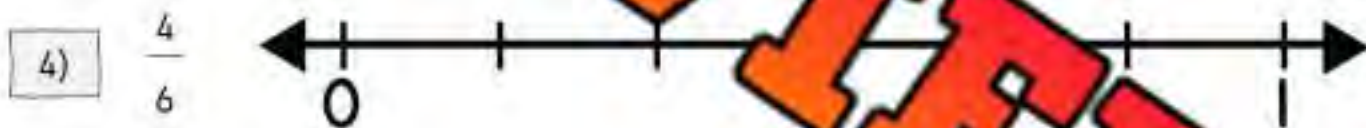
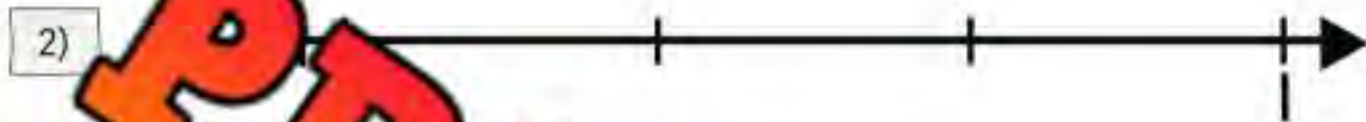
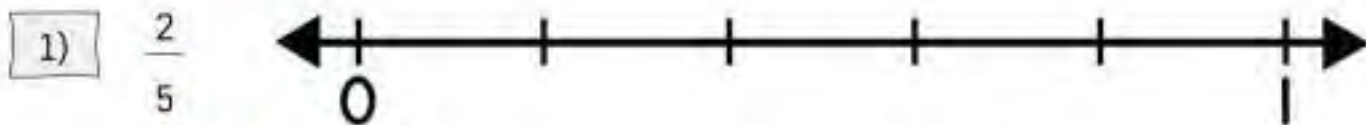
$3/4$

PREVIEW

Writing Fractions on a Number Line

Questions

Write the fraction on the number line



PREVIEW

Fractions Quiz

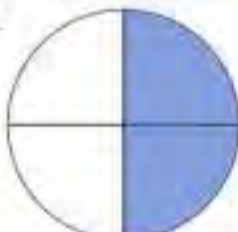
Part 1

Write the fraction and then label it – half, quarter, third, whole

1.



2.



3.



4.

**Part 2**

What fraction is shaded in each image below?

**Part 3**

Put the fractions in order from least to greatest

$\frac{4}{7}$

$\frac{5}{7}$

$\frac{1}{7}$

$\frac{3}{7}$

$\frac{7}{7}$

Part 4

Put the fractions in order from least to greatest

$$\frac{4}{4} \quad \frac{4}{8} \quad \frac{4}{9} \quad \frac{4}{5} \quad \frac{4}{10}$$

Part 5

Compare the fractions using $<$ $>$ $=$

1)

$$\frac{2}{6} \quad \square \quad \frac{2}{8}$$

3)

$$\frac{3}{4} \quad \square \quad \frac{3}{4}$$

4)

$$\frac{2}{6} \quad \square \quad \frac{2}{8}$$

5)

$$\frac{3}{9} \quad \square \quad \frac{3}{9}$$

6)

$$\frac{2}{9} \quad \square \quad \frac{5}{7}$$

8)

$$\frac{3}{8} \quad \square \quad \frac{7}{8}$$

Part 6

Write the fraction on the number

1)

$$\frac{3}{5}$$



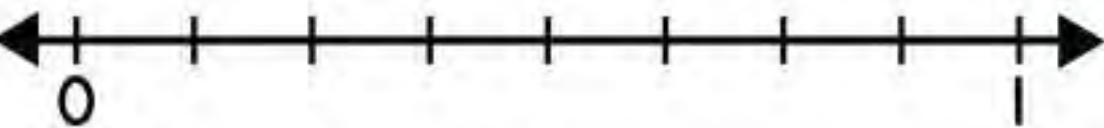
2)

$$\frac{2}{3}$$



3)

$$\frac{5}{8}$$



Counting To 10 By Tenths

Questions

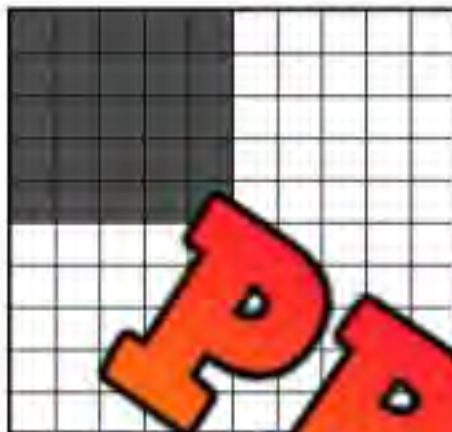
Continue counting by tenths by filling in the missing boxes

$\frac{1}{10}$						$\frac{6}{10}$			
			$4\frac{6}{10}$						
		8						$5\frac{2}{10}$	
$4\frac{1}{10}$									$1\frac{3}{10}$
	$7\frac{7}{10}$					$8\frac{5}{10}$			
$3\frac{6}{10}$									$\frac{8}{10}$
	$7\frac{1}{10}$								
		$9\frac{4}{10}$				9			
			$6\frac{7}{10}$						
		3							$2\frac{3}{10}$

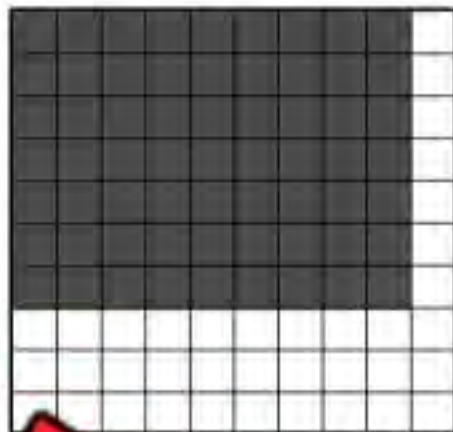
Fractions and Decimals

Part 1

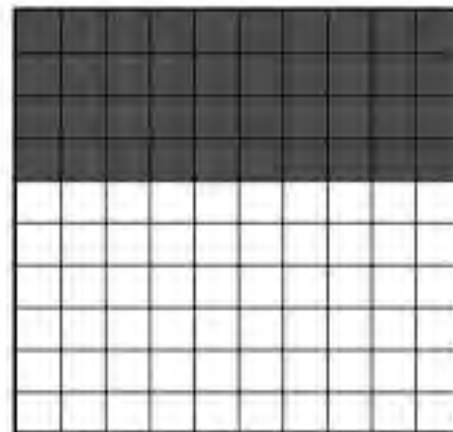
What fraction and decimal of the array is shaded in?



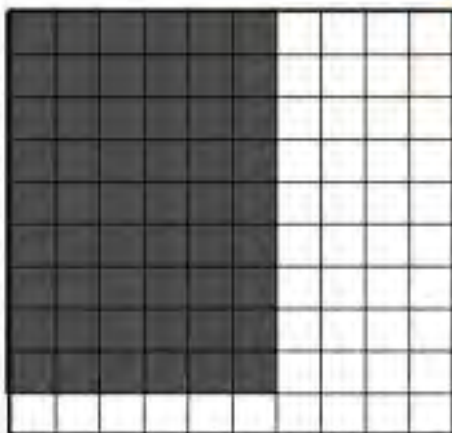
Fraction	Decimal



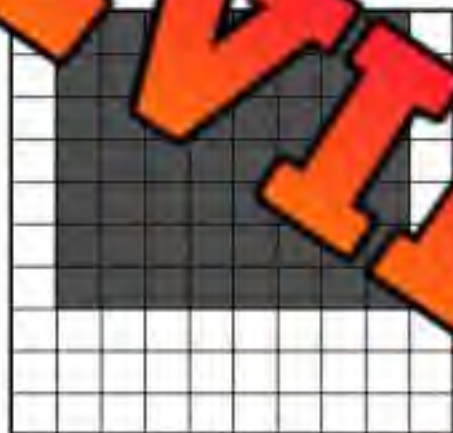
Fraction	Decimal



Fraction	Decimal



Fraction	Decimal



Fraction	Decimal



Fraction	Decimal

Part 2

Answer the word problems below

- 1) Daniel got 79 out of 100 on his math test. What is the fraction and decimal for his test mark?
- 2) Beth scored 20 out of 50 of her three-point shots. What was her three-point fraction and decimal for her three-point shots?

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	Hundreds	Tens	Ones	Decimal	Tenths
					Hundredths

Part 1

Write the name of the place value for the underlined number?

1) 5 200. <u>32</u>	2) <u>3</u> 56.44	3) 3 542. <u>47</u>	4) 2 314.68
5) 4 326. <u>43</u>	6) 8 264. <u>73</u>	7) <u>7</u> 12.34	8) 7 356. <u>47</u>
9) 3 102. <u>52</u>	10) 6 113. <u>71</u>	11) <u>1</u> 23.45	12) 3 374. <u>44</u>

Part 2

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

Comparing Decimals

Part 1

Compare the following numbers

1) 0.5 <input type="text"/> 0.2	2) 0.3 <input type="text"/> 0.4	3) 0.8 <input type="text"/> 0.6
4) 1.0 <input type="text"/> 0.9	5) 1.3 <input type="text"/> 0.8	6) 0.8 <input type="text"/> 0.5
7) 1.9 <input type="text"/> 2.0	8) 18.5 <input type="text"/> 20.1	9) 30.3 <input type="text"/> 25.9
10) 47.12 <input type="text"/> 33.53	11) 75.3 <input type="text"/> 75.3	12) 77.99 <input type="text"/> 77.92
13) 132.22 <input type="text"/> 132.65	14) 155.36 <input type="text"/> 155.36	15) 454.71 <input type="text"/> 454.71

Part 2

Compare the following numbers

- 1) Steve and Kim both ran in the 100 metre race last week. Steve ran it 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?



Exit Cards

Cut Out

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

Name: _____

Compare the following decimals

a) 0.7 0.9

b) 7.6 3.9

c) 56.1 43.4

d) 118.1 175.1

Name: _____

Compare the following decimals

a) 0.7 0.9

b) 7.6 3.9

c) 56.1 43.4

d) 118.1 175.1

Name: _____

Compare the following decimals

a) 0.7 0.9

b) 7.6 3.9

c) 56.1 43.4

d) 118.1 175.1

Name: _____

Compare the following decimals

a) 0.7 0.9

b) 7.6 3.9

c) 56.1 43.4

d) 118.1 175.1

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, 0.1

1.34, 2.29, 1.55, 2.42

10.43, 10.93, 21.45, 22.62

24, 53.24, 34.18, 48.42

Part 2

Order the numbers below from greatest to least

0.2, 0.6, 0.3, 0.1

0.5, 0

1.3, 1.9, 1.5, 1.1

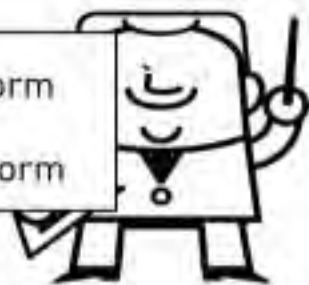
2.14, 2.92, 1.35, 1.42

13.54, 12.69, 10.45, 15.33

20.26, 17.63, 19.45, 18.61

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)	53.9	
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?

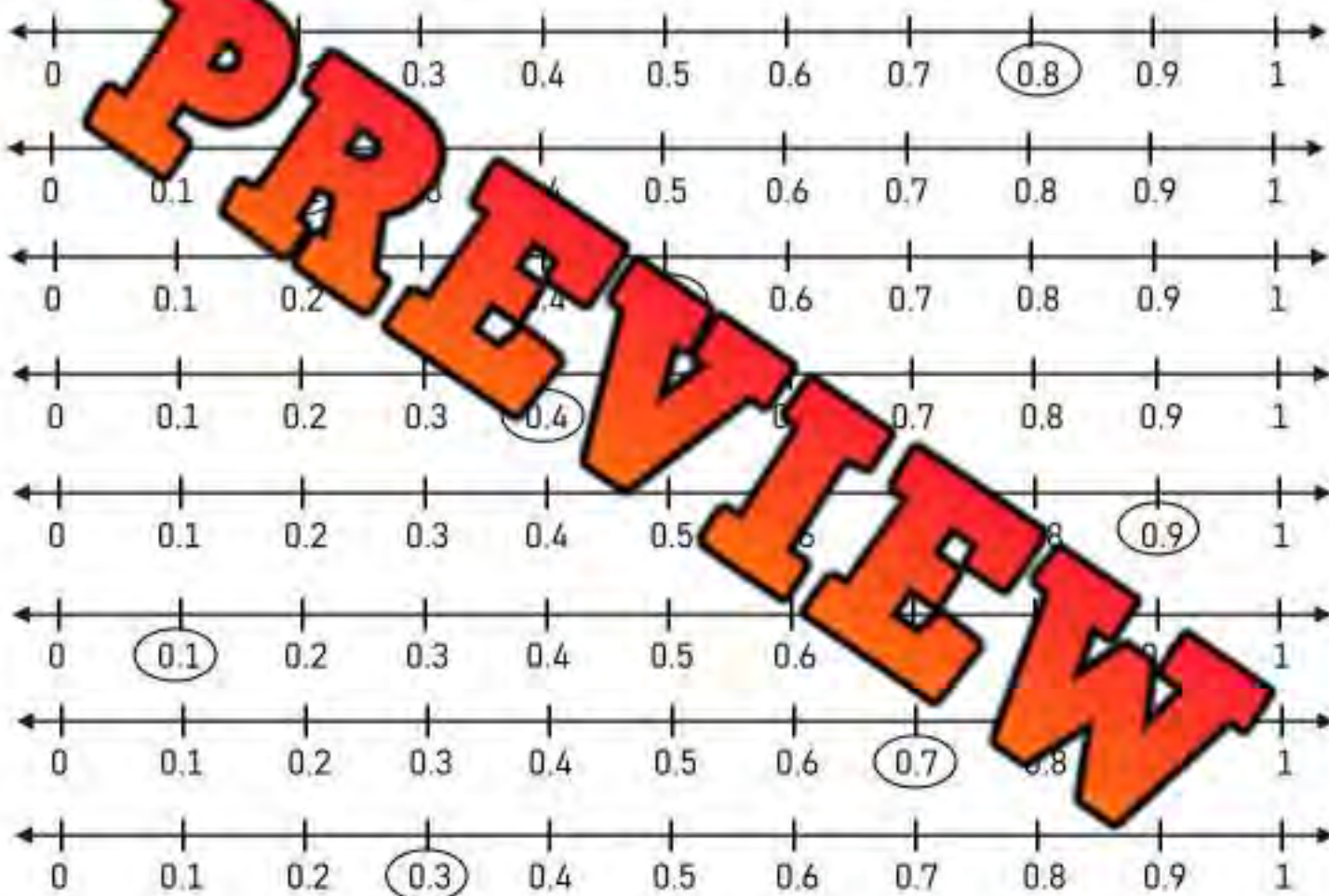
1)	$80 + 6 + 0.3$	
2)	$200 + 90 + 4 + 0.7$	
3)	$400 + 8 + 0.2 + 0.06$	
4)	$800 + 70 + 0.5 + 0.04$	
5)	$3\ 000 + 700 + 60 + 0.7 + 0.01$	
6)	$50\ 000 + 3\ 000 + 800 + 20 + 3 + 0.9 + 0.01$	

Rounding Decimal Numbers – Nearest Whole Number

Round Down

Round Up

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

Part 1 Round the decimal number to the nearest whole number. Circle the answer**Part 2** Answer the word problems below

1) James threw 10.3 metres in shot put. Round his score to the nearest whole number.

2) Harry ran a 200 metre race in 26.6 seconds. Round his time to the nearest whole number.

Rounding Decimal Numbers

Round Down

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 → _____	2) 0.8 → _____	3) 0.7 → _____
4) 0.1 → _____	5) 0.4 → _____	6) 0.3 → _____
7) 0.2 → _____	8) 0.9 → _____	9) 0.5 → _____

Part 2 Round the following numbers to the nearest whole number

1) 5.6 → _____	2) 4.2 → _____	3) 7.3 → _____
4) 8.2 → _____	5) 2.4 → _____	6) 5.5 → _____
7) 12.1 → _____	8) 10.7 → _____	9) 14.9 → _____
10) 22.2 → _____	11) 29.6 → _____	12) 27.3 → _____
13) 47.5 → _____	14) 53.8 → _____	15) 71.2 → _____

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¢	
650¢	
720¢	\$7.20
850¢	
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

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 \$ _____

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



$$\begin{aligned} &5.5 + 3.7 \\ &0.5 + 0.7 = 1.2 \\ &5 + 3 = 8 \\ &1.2 + 8 = 9.2 \end{aligned}$$

$$\begin{aligned} &2.3 + 1.4 \\ &0.4 = 0.7 \\ &2 \end{aligned}$$

$$2.3 + 4.1$$

$$5.8 + 6.1$$

$$12.4 + 6.5$$

$$13.4 + 4.2$$

$$6.51$$

$$27.3 + 6.7$$

$$24.25 + 11.63$$

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



$$\begin{aligned}5.5 + 3.7 \\5.5 + 3 = 8.5 \\8.5 + 0.7 = 9.2\end{aligned}$$

$3.3 + 2.4$

$3.3 + 2 = 5.3$

$5.3 + 0.4 = 5.7$

$1.5 + 3.3$

$4.5 + 1.7$

$14.4 + 5.5$

$18.5 + 10.7$

12.3

$24.52 + 10.23$

$25.44 + 3.53$

PREVIEW

Adding Decimals – Hundredths – No Regrouping

Questions

Use the standard algorithm to solve the addition problems below

	Hun.	Tenths	Ones	Tens
	3	5	1	
+				
<hr/>				

	Hun.	Tenths	Ones	Tens
	2	4	7	3
+				
	7	4	1	5
<hr/>				

	Hun.	Tenths	Ones	Tens
	5	1	2	3
+				
	4	1	2	6
<hr/>				

	Hun.	Tenths	Ones	Tens
	5	2	1	3
+				
	2	6	6	3
<hr/>				

	Hun.	Tenths	Ones	Tens
	1	3	2	7
+				
	3	3	4	1
<hr/>				

	Hun.	Tenths	Ones	Tens
	3	6	3	8
+				
	4	2	2	1
<hr/>				

	Hun.	Tenths	Ones	Tens
	0	1	2	3
+				
	5	8	7	2
<hr/>				

	Hun.	Tenths	Ones	Tens
	6	5	6	2
+				
	2	3	7	3
<hr/>				

	Hun.	Tenths	Ones	Tens
	4	5	6	1
+				
	2	3	3	7
<hr/>				

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) $\begin{array}{r} 41.22 \\ + 43.13 \\ \hline \end{array}$	5) $\begin{array}{r} 35.75 \\ + 54.20 \\ \hline \end{array}$
6) $\begin{array}{r} 32.71 \\ + 24.22 \\ \hline \end{array}$	7) $\begin{array}{r} 36.47 \\ + 22.47 \\ \hline \end{array}$	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) $\begin{array}{r} 23.62 \\ + 14.36 \\ \hline \end{array}$	14) $\begin{array}{r} 4.36 \\ + 14.36 \\ \hline \end{array}$	15) $\begin{array}{r} 31.25 \\ + 11.53 \\ \hline \end{array}$

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?

Mental Math - Subtracting Decimals – Subtracting Chunks**Directions:**

1. Keep the bigger number the same
2. Subtract the other whole number from the bigger number
3. Subtract the decimal from your answer

$$\begin{aligned} &6.3 - 3.5 \\ &6.3 - 3 = 3.3 \\ &3.3 - 0.5 = 2.8 \end{aligned}$$

$$\begin{aligned} &4.6 - 2.4 \\ &4.6 - 2 = 2.6 \\ &2.6 - 0.4 = 2.2 \end{aligned}$$

$$4.5 - 3.3$$

$$9.5 -$$

$$14.4 - 7.5$$

$$15.5 - 10.9$$




$$.6$$

$$48.3 - 11.8$$

$$52.6 - 30.3$$



PREVIEW

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	Coins
			

Money Used	Item	Change Due	Draw Coins
			

Money Used	Item	Change Due	Draw Coins
			

Name: _____

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Curriculum Connection
N4.B



Adding Money


		Total
\$ _____	\$ _____	\$45

Questions _____ in the table to provide change to your customer.

		Total
\$ _____	\$ _____	\$ _____

		Total
\$ _____	\$ _____	\$ _____



		Total
\$ _____	\$ _____	\$ _____

		Total
\$ _____	\$ _____	\$ _____

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

 \$1.50	 \$2.00	Total
\$ _____	\$ _____	\$ _____

 \$ _____	 \$4.50	Total
\$ _____	\$ _____	\$ _____

 \$5.75	 \$3.50	Total
\$ _____	\$ _____	\$ _____

 \$16.50	 \$12.25	Total
\$ _____	\$ _____	\$ _____

 \$43.15	 \$55.65	Total
\$ _____	\$ _____	\$ _____

Unit Quiz – Adding and Subtracting Decimals**Part 1****Adding**

	Tens	Ones	Tenths
	1		5
+		4	

	Tens	Ones	Tenths
	7	2	8
+	1	6	4

	Tens	Ones	Tenths	Hund.
	8	1	8	5
+	3	5	1	2

$$\begin{array}{r} 77.7 \\ + 15.5 \\ \hline \end{array}$$

$$\begin{array}{r} 24.54 \\ + 12.72 \\ \hline \end{array}$$

Part 2**Solve**

1) $214.24 + 202.71$

2) $353.68 + 203.48$

Part 3

Subtracting

	Hun.	Tens	Ones	.	Tenths
	5	8	4	.	4
-	2				0

	Hun.	Tens	Ones	.	Tenths
	3	5	6	.	3
-	1	6	4	.	5

	Hun.	Tens	Ones	.	Tenths
	4	2	5	.	3
-	1	5	3	.	6

	Hun.	Tens	Ones	.	Tenths	Hund.
	4	7	2	.	5	8
-	3	5	4	.	2	4

	Hun.	Tens	Ones	.	Tenths	Hund.
	8	9	2	.	9	
-	2	5	5	.	5	

	Hun.	Tens	Ones	.	Tenths	Hund.
	8	5	8	.	5	4
-	3	0	0	.	8	3

Part 4

Solve

1) $468.74 - 252.41$

2) $174.78 - 143.95$

3) 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?



4) Hanna bought an ice cream cone for \$4.75. She gave the cashier \$10.00. How much change did she get back?



Part 5 Add up the items and provide change due on _____ customer paid with _____

Money Used	Item	Item	Change Due
			_____

Money Used	Item	Item	Change Due
			_____



Grade 4

Patterns and Relations



	Curriculum Expectations	Pages
P4.1	Demonstrate an understanding of patterns and relations by: • identifying and describing patterns and	
Preview of 125 pages from this product that contains 291 pages total.		
P4.2	Demonstrate an understanding of equations involving symbols to represent an unknown value by: • writing an equation to represent a problem • solving one step equations.	84 - 150

Name: _____

5

Fibonacci Sequence

The Fibonacci sequence is a pattern in which each number is the sum of the two numbers before it. For example, the first 10 numbers of the sequence are:

0, 1, 1, 2, 3, 5, 8, 13, 21, 34

Part 1

Fill in the numbers below each pair of numbers

PREVIEW

										1										
					1						1									
				1					2					1						
			1								1									
		1												1						
	1																		1	
1																				1

Part 2

How many terms can you write in the Fibonacci sequence?

Name: _____

6

Fibonacci Sequence

Directions

Fill in the missing numbers



1)	0	1	1	2		
----	---	---	---	---	--	--

2)		89	144	233		
----	--	----	-----	-----	--	--

3)	3		5	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

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

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 1, add 1 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

Multiplication Chart - Patterns

**Questions**

Fill in the multiplication table below

x	1	2	3	4	5	6	7	8	9	10
1			3		5		7		9	10
2				8		12		16		
3						18			27	30
4	4	8		16			28		36	
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	

PREVIEW

Multiplication Chart - Patterns

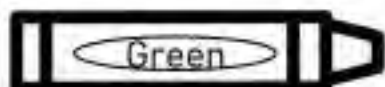
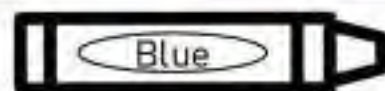
x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

PREVIEW

Questions

Follow the instructions below

1. Count by 2's and colour the numbers
2. Count by 3's and colour the numbers
3. Count by 5's and colour the numbers
4. Count by 10's and colour the numbers



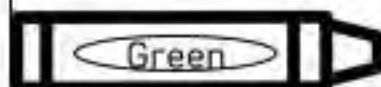
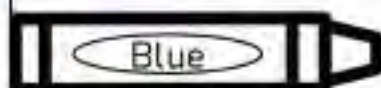
Multiplication Chart - Patterns

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

Questions

Answer the questions and colour the chart based on the answers

3×3	5×5	7×6	9×2
2×4	7×2	5×7	6×6
4×5	10×9	8×8	9×7
4×3	9×3	8×6	7×7

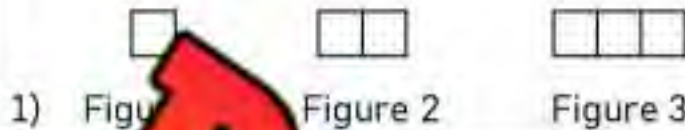


Representing Picture Sequence With Numbers

Directions

Write the numerical sequence that represents the picture sequence

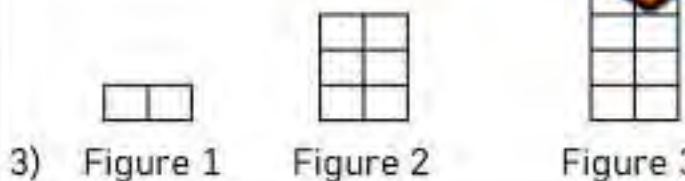
Numerical Sequence



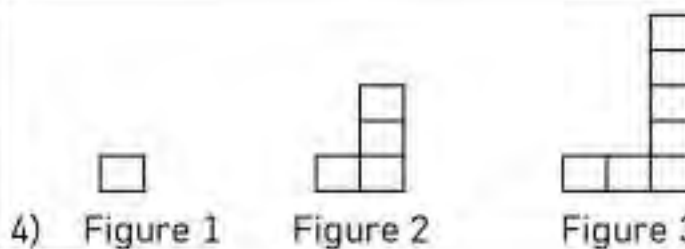
Numerical Sequence



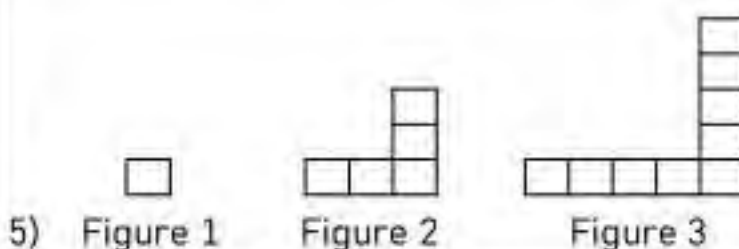
Numerical Sequence



Numerical Sequence



Numerical Sequence



Representing Picture Sequence With Numbers

Questions

Write the numerical sequence that represents the picture sequence



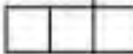
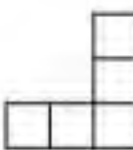
1)    

Figure 1 Figure 2 Figure 3 Figure 4

Numerical Sequence


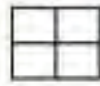

2)   

Figure 1 Figure 2 Figure 3 Figure 4

Numerical Sequence


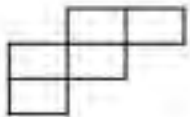
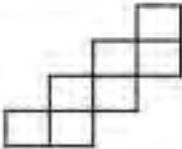
3)   

Figure 1 Figure 2 Figure 3 Figure 4

Numerical Sequence


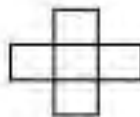
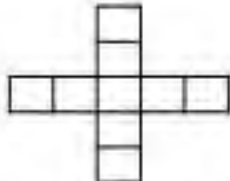
4)   

Figure 1 Figure 2 Figure 3 Figure 4

Numerical Sequence

Representing Picture Sequence With Numbers

Questions

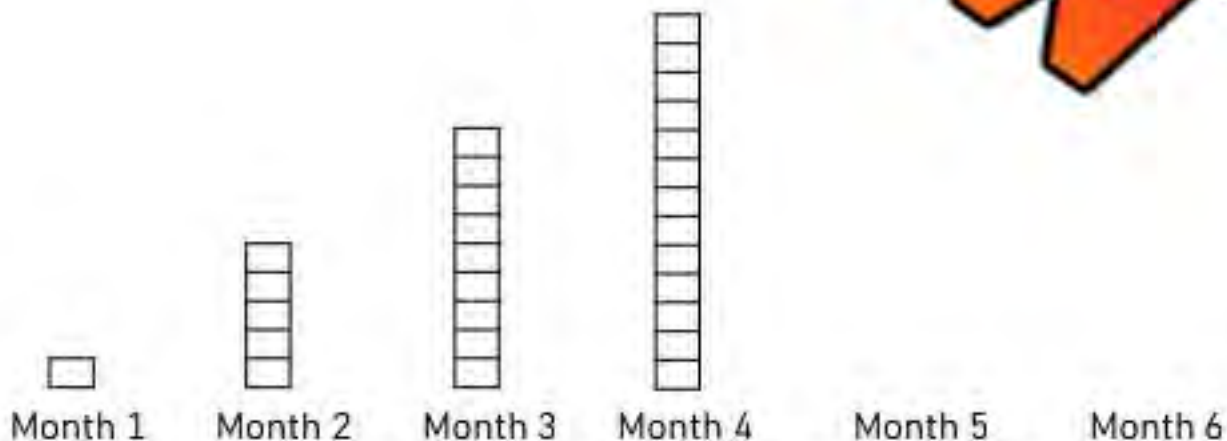
Continue the picture sequence and represent it using numbers

1) Matt had a bunch of X's to play with. He made the following pattern below.



Numerical
Sequence

2) Chris puts a rectangle for every book he reads in the first 4 months of school.



Numerical
Sequence

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	

Kids **Pieces of Candy**

1	
2	
3	
4	
5	
10	

Your family is having a birthday party for your brother.
You are going to the party. Each kid will get 7 pieces

1) How many pieces of candy do you need to buy?

2) What if 10 kids will go 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	

Translating Patterns - Table of Values

Part 1 Translate the increasing patterns into a table of values

A train has the following people in each train car.

Car 1 Car 2 Car 3 Car 4



Term Number (Cars)		4	5	8
Term Value (People)				

Part 2 Translate the increasing pattern into a table of values

Steven is looking for golf balls in the woods. He finds the following balls each hour.

Hr 1 Hr 2 Hr 3 Hr 4



Term Number (Hour)	1	2	3	4	5	9
Term Value (Golf Balls)						

PREVIEW

Translating Patterns - Table of Values

Questions

Translate the increasing patterns into a table of values

1) Stacy marks an x each day for how many pieces of fruit she eats.



Term Number (Day)	1	2	3	4	5
Term Value (Fruit)					

2) Rob made a pattern using checkers.

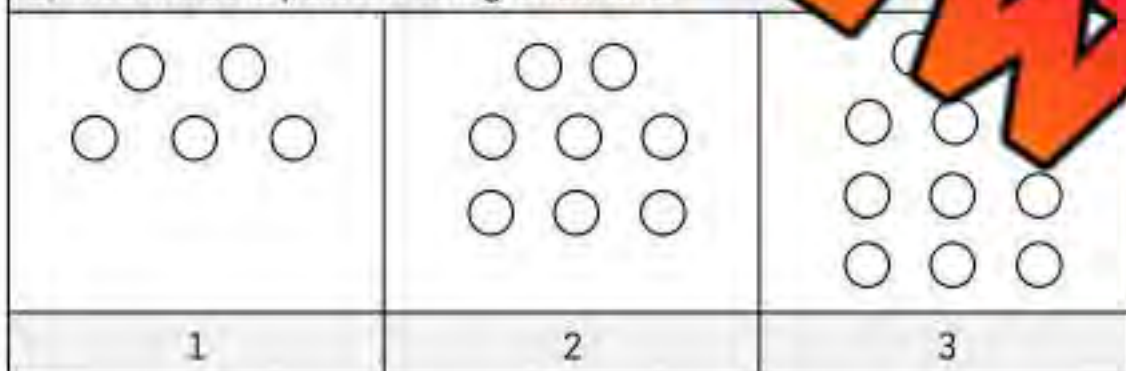





Figure	1	2	3	4	5
Number of Checkers					

Translating Patterns - Table of Values

Part 1

Extend the pattern by drawing the tiles below

					
1		4	5	6	

Part 2

Translate the pattern into a table of values below

Figure	1	2	3	4	5	6
Tiles						

Questions

1) If I had 37 tiles, what figure could I make?

2) Can I make a figure with exactly 56 tiles?

3) Fill in the pattern rule below.

Start at _____, add _____ each time.

Exit Cards

Cut Out

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

Name: _____

Answer the questions below by using the table of values.

When you read a book, you get 5 stickers as a reward. Fill in the table to learn more about your sticker collection.

# of Books Read	Stickers Earned
2	
3	
4	
5	
10	

Name: _____

Answer the questions below by using the table of values.

When you read a book, you get 5 stickers as a reward. Fill in the table to learn more about your sticker collection.

# of Books Read	Stickers Earned
2	
3	
4	
5	
10	

Name: _____

Answer the questions below by using the table of values.

When you read a book, you get 5 stickers as a reward. Fill in the table to learn more about your sticker collection.

# of Books Read	Stickers Earned
2	
3	
4	
5	
10	

Name: _____

Answer the questions below by using the table of values.

When you read a book, you get 5 stickers as a reward. Fill in the table to learn more about your sticker collection.

# of Books Read	Stickers Earned
2	
3	
4	
5	
10	

Growing Patterns - Addition



Growing/Increasing Patterns

$$\begin{array}{cccccc}
 +10 & +10 & +10 & +10 & +10 & \\
 \wedge & \wedge & \wedge & \wedge & \wedge & \\
 10, & 20, & 30, & 40, & 50, & 60
 \end{array}$$

$$\begin{array}{ccccc}
 +5 & +5 & +5 & +5 & +5 \\
 \wedge & \wedge & \wedge & \wedge & \wedge \\
 3, & 8, & 13, & 18, & 23, & 28
 \end{array}$$



Part 1

Growing Patterns - Addition

$$\begin{array}{cc}
 \wedge & \wedge \\
 1) & 2, 4, 6, \underline{\quad}, \underline{\quad}, \underline{\quad}
 \end{array}$$

$$\begin{array}{cc}
 \wedge & \wedge \\
 2) & 6, 10, 14, \underline{\quad}, \underline{\quad}, \underline{\quad}
 \end{array}$$

$$\begin{array}{cc}
 \wedge & \wedge \\
 3) & 22, 27, 32, \underline{\quad}, \underline{\quad}, \underline{\quad}
 \end{array}$$

$$\begin{array}{cc}
 \wedge & \wedge \\
 5) & 73, 80, 87, \underline{\quad}, \underline{\quad}, \underline{\quad}
 \end{array}$$

$$\begin{array}{cc}
 \wedge & \wedge \\
 6) & 112, \underline{\quad}, \underline{\quad}, \underline{\quad}
 \end{array}$$

Part 2

Follow the rule by adding the next number in the

$$\begin{array}{l}
 1) \text{ (Add 2)} \\
 7, 9, 11, \underline{\quad}, \underline{\quad}, \underline{\quad}
 \end{array}$$

$$\begin{array}{l}
 2) \text{ (Add 3)} \\
 22, 25, 28, \underline{\quad}, \underline{\quad}, \underline{\quad}
 \end{array}$$

$$\begin{array}{l}
 3) \text{ (Add 6)} \\
 43, 49, 55, \underline{\quad}, \underline{\quad}, \underline{\quad}
 \end{array}$$

$$\begin{array}{l}
 4) \text{ (Add 5)} \\
 62, 67, 72, \underline{\quad}, \underline{\quad}, \underline{\quad}
 \end{array}$$

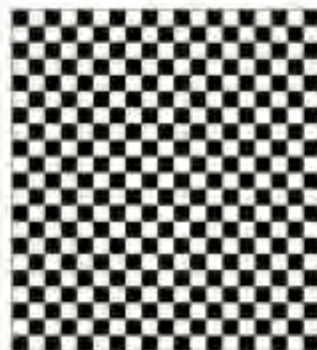
$$\begin{array}{l}
 5) \text{ (Add 10)} \\
 83, 93, 103, \underline{\quad}, \underline{\quad}, \underline{\quad}
 \end{array}$$

$$\begin{array}{l}
 6) \text{ (Add 4)} \\
 147, 151, 155, \underline{\quad}, \underline{\quad}, \underline{\quad}
 \end{array}$$

Math Activity Title: Pathway to Patterns**Objective**

What are we learning about?

To help students understand and create increasing addition number patterns using a simple and engaging method that involves visual aids and hands-on interaction.

**Materials**

What you will need for the activity.

- Colored counters or small objects (like beans or beads)
- Grid paper
- Pencils
- Rulers

Instructions

How you will complete the activity

1. Start with a discussion about what number patterns are, explaining that they involve adding the same amount to the previous number to get the next number.
2. Hand out grid paper and colored counters to each student.
3. Ask students to choose a starting number and an increment. They should write these at the top of their grid paper.
4. Students place a counter on the grid to represent their starting number in the first box at the bottom of the grid paper.
5. Students then add their chosen increment to the starting number, place another counter to represent the new number in the next box up on the grid.
6. Continue this process, adding the increment each time and moving up the grid, placing a counter for each new number, until they reach the top of the grid or a set limit.
7. Once their pattern is complete, students use their pencils and rulers to draw a line connecting the counters, creating a visual "path" of their number pattern.
8. Encourage students to write out their complete number sequence below the grid.
9. Have students present their patterns to the class, explaining their choice of starting number and increment.

Name: _____

Grid

Use the grid below for the activity



Number Sequence

Word Problems: Growing Patterns - Addition**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 2 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 each day. 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?	

Growing Addition Patterns - Rules



+4 +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

47, 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

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, _____, 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.

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.

Pattern Rule - Addition

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, _____, 51, _____, _____

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

**Part 2**

Write your own patterns using the pattern rule

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

Input/Output Table - Addition

Rule: add 5

In	Out
25	30
45	50
65	70
85	90



Que Fill in the input/output tables below

In	Out
20	
30	
50	
120	

Rule: add 4

In	Out
15	
47	
78	
11	

Rule: add 6

In	Out
2	
18	
44	
92	

Rule: add 8

In	Out
73	
98	
117	
168	

Rule: add 7

In	Out
22	
33	
54	
85	

Rule: add 12

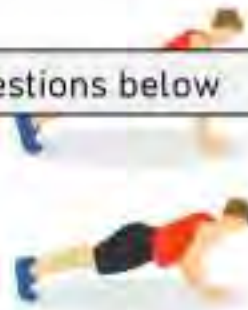
In	Out
15	
42	
85	
124	

Push-Up Challenge

Questions

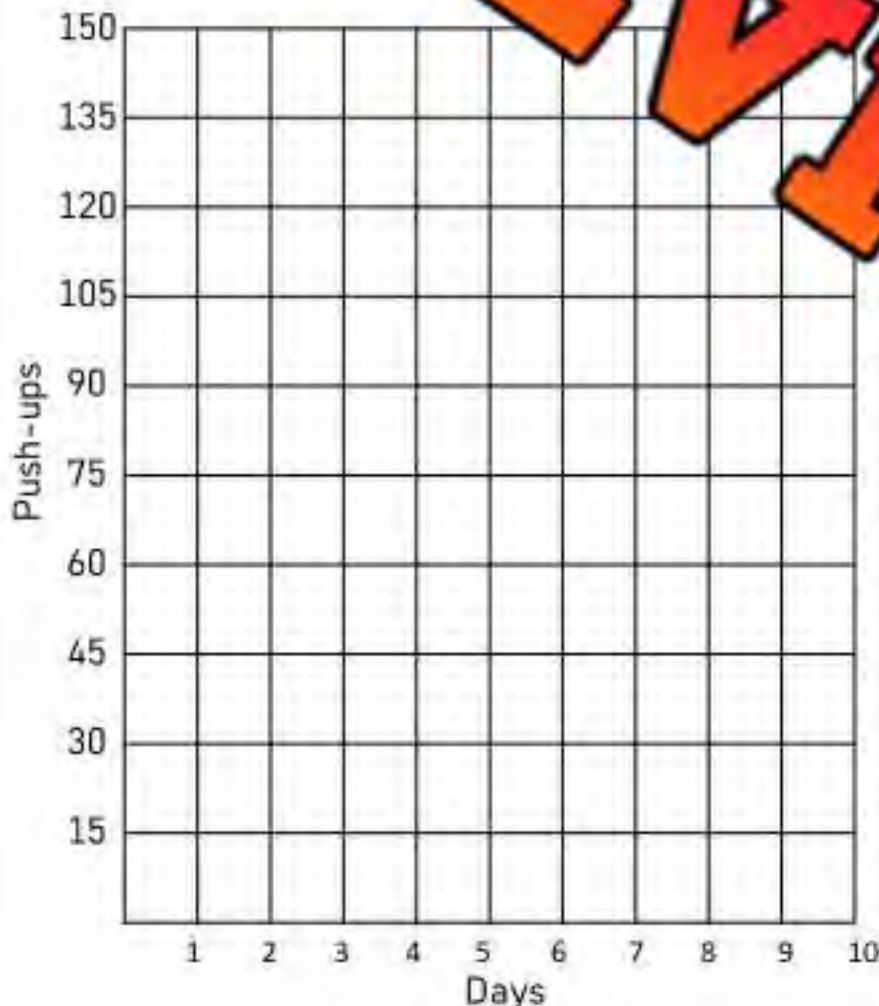
Complete the table of values and answer the questions below

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)	1	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 do in 5 days?

3) If his friend challenged him to do 30 pushups for 10 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?

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 10 eggs?



Patterning Word Problem - Halloween

Questions

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

Ben is trick-or-treating for Halloween. He leaves his house with 13 candies to start. He gets _____ candies from 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?



Patterning Word Problem – Growing Hair

Questions

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

Tyler's hair is 50mm long in January. In February, his hair is 62mm long. In March, his hair is 74mm long.

a) How long will his hair be in April if the pattern continues?

b) How long will his hair be in July?



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
Expectancy	70	72	74	76	78	80	82	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 2050?
- d) Why do you think the life expectancy rises over time?

Patterning Word Problem - Shapes

Questions

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

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

- Read the problem carefully
 Underline important information
 Draw pictures
 Create a table or chart
 Solve the problem
 Check your answer

Juan uses toothpicks to make a pattern. Each line is a toothpick.



Figure 1



Figure 2

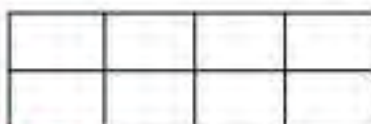


Figure 3

- a) How many toothpicks will Juan need to make Figure 4?

- b) Juan thinks he will need 55 toothpicks to make the 10th figure. Is he right? Explain.



Growing Patterns - Multiplication

Growing Pattern - Multiplication

$$\begin{array}{ccccccccc} & & \times 2 & & \times 2 & & \times 2 & & \times 2 & & \times 2 & & \\ & & \wedge & & \wedge & & \wedge & & \wedge & & \wedge & & \\ & & 1 & & 2 & & 4 & & 8 & & 16 & & 32 \end{array}$$



Part 1

Extend the growing pattern

1) 1, 3, 9, _____

2) 2, 4, 8, _____

3) 2, 6, 18, _____

4) 10, 100, _____

5) 5, 10, 20, _____

6) _____, 180, _____

Part 2

Follow the rule to continue the growing pattern

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 starts with 10 books. Each month, he triples the number of books he has in the library. How many books will Noah have after the first month?	
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 following 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 8 th 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 4 th day?	

Input/Output Table - Multiplication



Rule: multiply by 2

In	Out
1	2
3	6
5	10
7	14

Questions: Complete the input/output tables below.

Rule: multiply by 2

In	Out
2	
5	
10	
20	

Rule: multiply by 6

In	Out
2	
4	
6	
8	

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	

Growing Pattern - Multiplication - Rules

 $x3 \quad x3 \quad x3$
 $\wedge \quad \wedge \quad \wedge$

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

2, 6, 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

Growing Pattern - Multiplication - Rules

Questions

Write your own sequences using the pattern rule

1) _____

Pattern Rule: Start at 2, multiply by 2 each time

Pattern Rule: Start at _____ 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, 162, _____

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 late fees. 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?

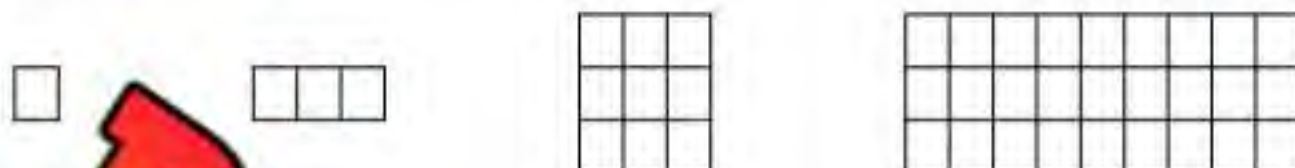
Multiplication Pattern – Word Problem

Questions

Answer the questions below



Rachel created the pattern below using blocks.



1) Complete the table below:

Term Number	1	2	3	4	5
Term Value (Blocks)					

2) How many blocks would she need for fifth shape?



3) How many blocks would she need to make her sixth shape?

4) Write the first 6 terms in the sequence using numbers below.

Multiplication Pattern – Word Problem

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 (Laps)	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, following the pattern?

- 4) Write the first 6 terms in the sequence using numbers below.

Name: _____

57

Pattern Rules



Questions

Fill in the rules

18, 25, 32, 39, 46, 53

Start at _____ each time

1, 3, 9, 27, 81, 243, 729

Start at _____ each time

50, 100, 150, 200, 250, 300

Start at _____ each time

25, 50, 100, 150, 200, 250, 300

Start at _____ each time

200, 400, 600, 800, 1000, 1200

Start at _____ each time

1, 10, 100, 1000, 10000, 100000

Start at _____ each time

2, 6, 18, 54, 162, 486

Start at _____ each time

20, 40, 60, 80, 100, 120, 140

Start at _____ each time

PREVIEW

Extending Patterns

Questions

Determine the pattern rule and then fill in the blanks

1)	0	100	200	300			
Pattern Rule:							

2)		250	375	500			
Pattern Rule:							

3)	2	4		16			
Pattern Rule:							

4)	1	5	25	125			
Pattern Rule:							

5)	10	50	250	1250			
Pattern Rule:							

6)	30	100	170	240			
Pattern Rule:							

7)	500	1000	1500	2000			
Pattern Rule:							

8)	1	4	16	64			
Pattern Rule:							

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.

- 24 task cards
- Student answer recording sheets
- Pencils



Instructions

What you will do for the activity

1. Introduce the concept of patterns in mathematics 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 document their responses.
4. Encourage teamwork by having students collaborate 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

Start with 15. Multiply by 2 to get the next number. What is the fourth number?

- a) 9
- b) 8
- c) 7

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

Start with 10. Divide by 2 to get the next number. What is the third number?

- a) 5
- 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

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 13:

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

Card 15:

Begin with 10. Subtract 5 and then add 5 to get the next number. What is the third number?

- a) 10
- b) 25
- 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

Start with 4. Subtract 0.5 to get the next number. What is the third number?

- a) 7.5
- b) 10
- c) 8.5

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

Begin with 10. Subtract 2, then add 10 repeatedly. What is the second number?

- a) 10
- b) 90
- 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

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

Relationship Between Whole Numbers

Directions Investigate the relationship between addition and subtraction below

1) Fill in the blanks to see the relationship between adding and subtracting 6 tenths

Addition	Subtraction
$4.0 + 0.6 =$ _____	$4.6 - 0.6 =$ _____
$4.1 + 0.5 =$ _____	$4.6 - 0.5 =$ _____
$4.2 + 0.4 =$ _____	$4.6 - 0.4 =$ _____
$4.3 + 0.3 =$ _____	$4.6 - 0.3 =$ _____
$4.4 + 0.2 =$ _____	$4.6 - 0.2 =$ _____
$4.5 + 0.1 =$ _____	$4.6 - 0.1 =$ _____
$4.6 + 0.0 =$ _____	$4.6 - 0.0 =$ _____

2) Fill in the blanks to see the relationship between adding and subtracting 7 tenths

Addition	Subtraction
$8.0 + 0.7 =$ _____	$8.7 - 0.7 =$ _____
$8.1 + 0.6 =$ _____	$8.7 - 0.6 =$ _____
$8.2 + 0.5 =$ _____	$8.7 - 0.5 =$ _____
$8.3 + 0.4 =$ _____	$8.7 - 0.4 =$ _____
$8.4 + 0.3 =$ _____	$8.7 - 0.3 =$ _____
$8.5 + 0.2 =$ _____	$8.7 - 0.2 =$ _____
$8.6 + 0.1 =$ _____	$8.7 - 0.1 =$ _____
$8.7 + 0.0 =$ _____	$8.7 - 0.0 =$ _____

Relationship Between Whole Numbers

Part 1

Investigate the relationship between multiplication and division below

1) Fill in the blanks to see the relationship between multiplication and division.

Multiplication	Division
$8 \times 1 = \underline{\quad}$	$8 \div 1 = \underline{\quad}$
$8 \times 2 = \underline{\quad}$	$16 \div 2 = \underline{\quad}$
$8 \times 3 = \underline{\quad}$	$24 \div 3 = \underline{\quad}$
$8 \times 4 = \underline{\quad}$	$32 \div 4 = \underline{\quad}$
$8 \times 5 = \underline{\quad}$	$40 \div 5 = \underline{\quad}$
$8 \times 6 = \underline{\quad}$	$48 \div 6 = \underline{\quad}$
$8 \times 7 = \underline{\quad}$	$56 \div 7 = \underline{\quad}$
$8 \times 8 = \underline{\quad}$	$64 \div 8 = \underline{\quad}$
$8 \times 9 = \underline{\quad}$	$72 \div 9 = \underline{\quad}$
$8 \times 10 = \underline{\quad}$	$80 \div 10 = \underline{\quad}$

Part 2

Write the inverse multiplication or division sentence

Multiplication	Division
$5 \times 3 = \underline{\quad}$	
	$24 \div 6 = \underline{\quad}$
$7 \times 6 = \underline{\quad}$	
	$36 \div 4 = \underline{\quad}$

Multiplication	Division
$8 \times 4 = \underline{\quad}$	
	$56 \div 7 = \underline{\quad}$
$9 \times 8 = \underline{\quad}$	
	$45 \div 5 = \underline{\quad}$

Relationship Between Decimals/Whole Numbers

Directions Represent the number by filling in the table. The first one is done for you

Number	Tens	Ones	Tenths
37.1	3	+ 7	+ 1
37.1	2	+ 17	+ 1
37.1	1	+ 27	+ 1
37.1	0	+ 37	+ 1

Relationship Pattern

When the tens place goes down 1, the ones place goes up by _____.

Number	Tens	Ones	Tenths
37.1	3	+ 7	+ 1
37.1	3	+ 7	+ 11
37.1	3	+ 5	+ _____
37.1	3	+ _____	+ _____

Relationship Pattern

When the ones place goes down 1, the tenths place goes up by _____.

How many different ways can you represent the number 37.1?

Tens	Ones	Tenths
2	+ 5	+ 121

Relationship Between Decimals/Whole Numbers

Directions Represent the number by filling in the table. The first one is done for you

Number	Tens	Ones	Tenths
56.3	5	+ ____	+ 3
56.3	4	+ ____	+ 3
56.3	3	+ ____	+ 3
56.3	2	+ ____	+ 3

Relationship Pattern

When the tens place goes down 1, the ones place goes up by _____.

Number	Tens	Ones	Tenths
56.3	5	+ 6	+ ____
56.3	5	+ 5	+ ____
56.3	5	+ 4	+ ____
56.3	5	+ 3	+ ____

Relationship Pattern

When the ones place goes down 1, the tenths place goes up by _____.

How many different ways can you represent the number 56.3?

Tens	Ones	Tenths
4	6	+ 103

Decimal Patterns - Adding

**Questions**

Growing Patterns - Addition

1) 4.0, 5.0, 6.0, _____, _____, _____

Pattern Rule: _____

2) 6.3, 7.0, _____, _____, _____

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: _____

Growing Addition Decimal Pattern

1) 7.2, 9.2, 11.2, _____, _____, _____

2) 92.4, 92.8, _____, _____, _____

3) 41.6, 42.8, 44.0, _____, _____, _____

4) 20.5, 23.0, 25.5, _____, _____, _____

Name: _____

Growing Addition Decimal Pattern

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: _____

Growing Addition Decimal Pattern

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: _____

Growing Addition Decimal Pattern

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, _____, _____, _____

Algebra Quiz - Patterning**Part 1**

Continue the Fibonacci sequences below

1)	0	1	1	2		
----	---	---	---	---	--	--

2)	2	3	5	8		
----	---	---	---	---	--	--

3)	13	21	34	55		
----	----	----	----	----	--	--

Part 2

Follow the rules and extend the pattern

1) (Add 5)

13, 18, 23, _____, _____, _____

2) (Add 7)

23, 30, 37, _____, _____, _____

3) (Subtract 6)

57, 51, 45, _____, _____, _____

4) (Subtract 12)

82, 70, 58, _____, _____, _____

5) (Add 10)

183, 193, 203, _____, _____, _____

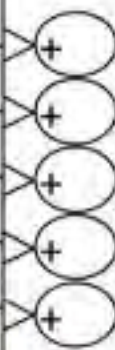
6) (Subtract 11)

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

Figure 1

Figure 2

Figure 3

Figure 4

Figure	Term Value
1	
2	
3	

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 patterns below

1) 1, 3, 9, _____, _____

2) 2, 4, 8, _____, _____

3) 2, 6, 18, _____, _____

4) 10, 100, 1000, _____, _____

Part 6

Use the pattern rule to fill in the blanks

1) _____, _____, _____, _____
Pattern Rule: Start at 2, multiply by 2 each time2) _____, _____, _____, _____
Pattern Rule: Start at 3, multiply by 3 each time**Part 7**

Answer the questions below

Harper made a deal with her parents about her allowance. She gets 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) Would Harper have enough money by day 12 to buy a \$20 hat?

Sorting Data – Carroll Diagram

Part 1

Sort the animals into the correct categories

						
Cow	Wolf	Dog	Cat	Goldfish	Gorilla	Human

	Has 4 Legs	Has 0-2 Legs
Can Be A Pet		
Not A Pet		

Part 2

Give examples of animals that fit the following categories

Can you think of another animal that...

1. Is a pet with 4 legs? _____
2. Has 4 legs and is not a pet? _____
3. Has 0-2 legs and is a pet? _____
4. Has 0-2 legs and is not a pet? _____

Sorting Data – Carroll Diagram

Part 1

Sort the numbers into the correct categories



	Number greater than 100	Number less than 100
Odd number		
Even Number		

Part 2

Give examples of numbers that fit the following categories

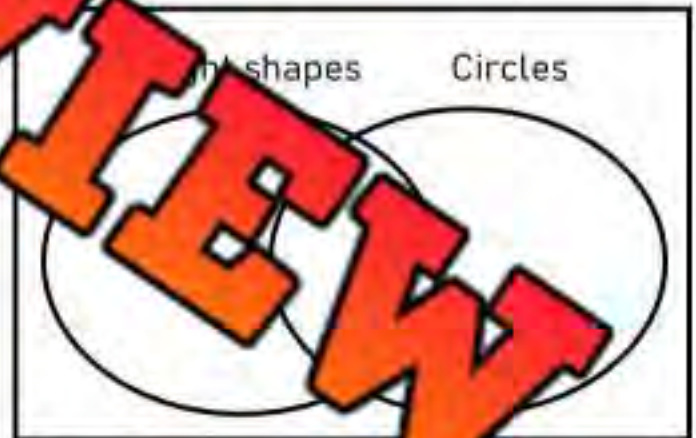
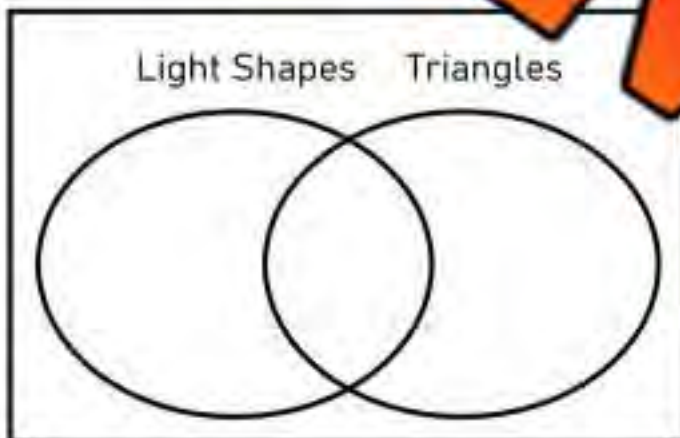
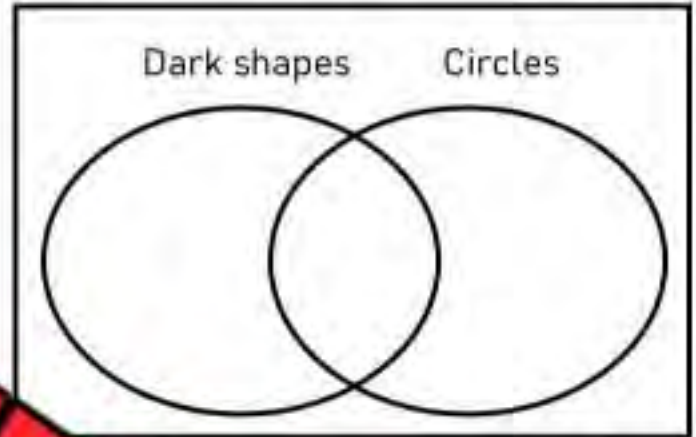
Can you think of another number that...

1. Is odd and greater than 100? _____
2. Is odd and less than 100? _____
3. Is even and greater than 100? _____
4. Is even and less than 100? _____
5. Is even and between 50 and 100? _____
6. Is odd and between 300 and 1000? _____

Sorting Data – Venn Diagram

Part 1

Sort the shapes into the correct categories



Part 2

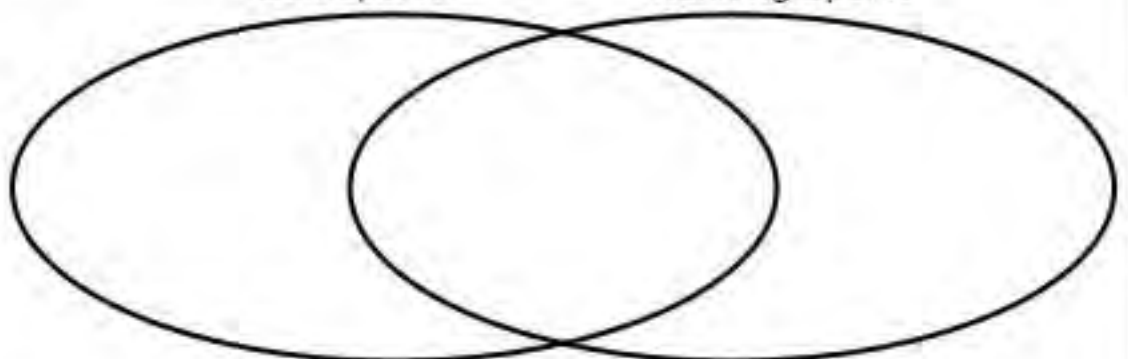
Sort the sports into the correct categories

Sports

- Basketball
- Soccer
- 100 metre run
- Marathon run
- Tennis
- Golf
- Bowling

Ball Sports

Running Sports



Name: _____

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Curriculum Connection
P4.1

Sorting Data – Venn Diagram

Directions

Sort the animals into the correct categories



Butterfly



Duck



Fish



Fly



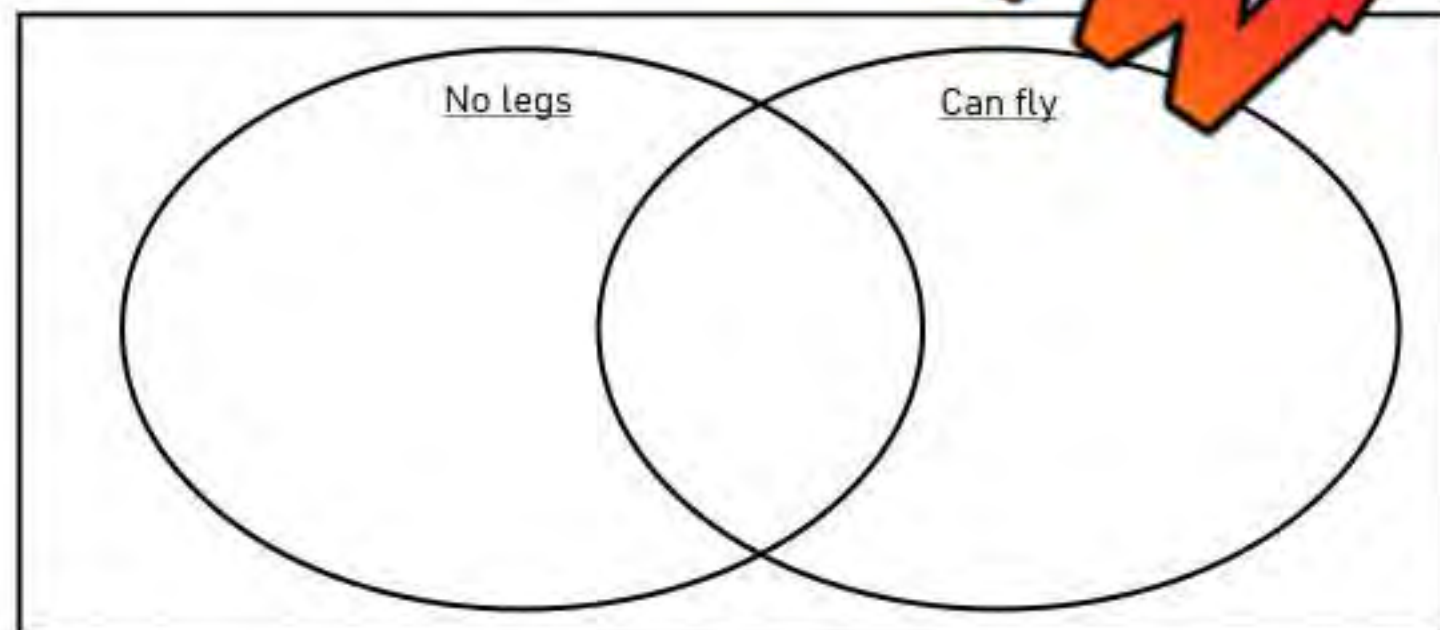
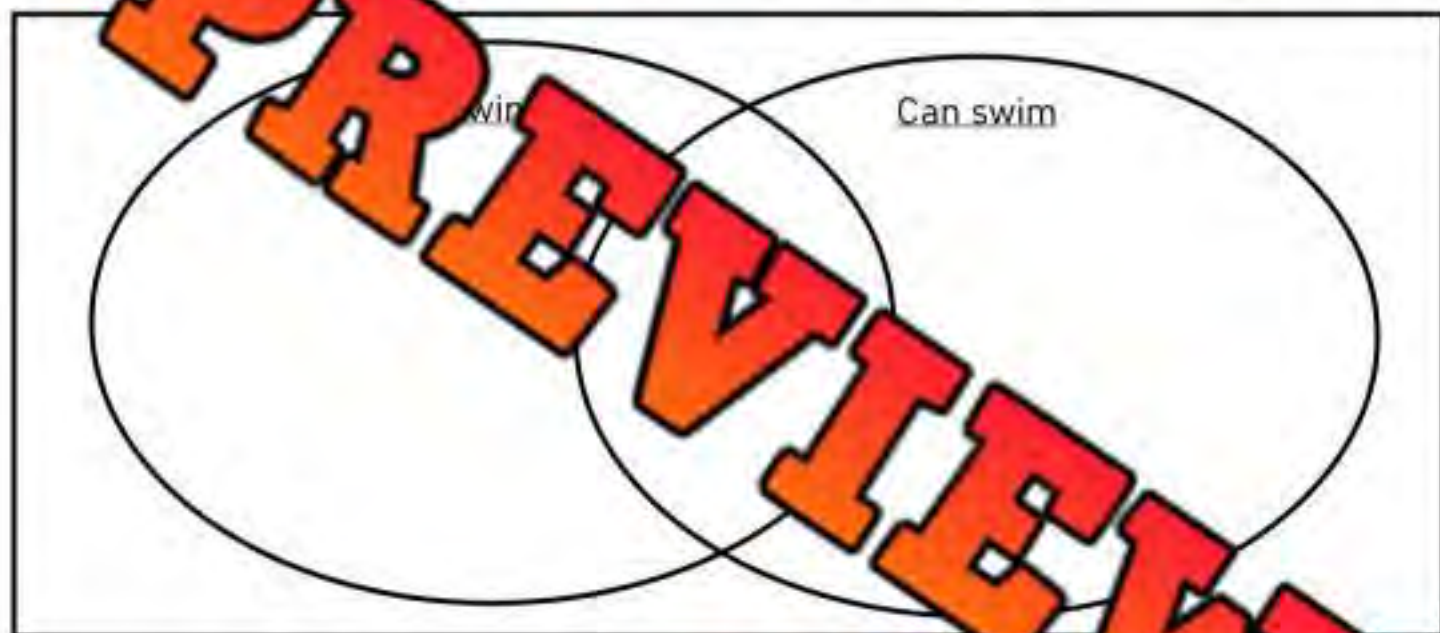
Eagle



Eel



Snake



Exit Cards

Cut Out

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

Name: _____

Sort the animals into the correct categories.

Animals

- Horse - Bear - Lion
- Wolf - Cow - Human

Eats Animals

Eats Plants

Name: _____

Sort the animals into the correct categories.

Animals

- Horse - Bear - Lion
- Wolf - Cow - Human

Eats Animals

Eats Plants

Name: _____

Sort the animals into the correct categories.

Animals

- Horse - Bear - Lion
- Wolf - Cow - Human

Eats Animals

Eats Plants

Name: _____

Sort the animals into the correct categories.

Animals

- Horse - Bear - Lion
- Wolf - Cow - Human

Eats Animals

Eats Plants

Name: _____

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Curriculum Connection
P4.1

Sorting Data – Carroll Diagram

22	36	13	75	56
25	41	27	47	1

Part 1

Sort the numbers into the correct categories in the Carroll diagram

	Less Than 30	More Than 30
Odd Numbers		
Even Numbers		

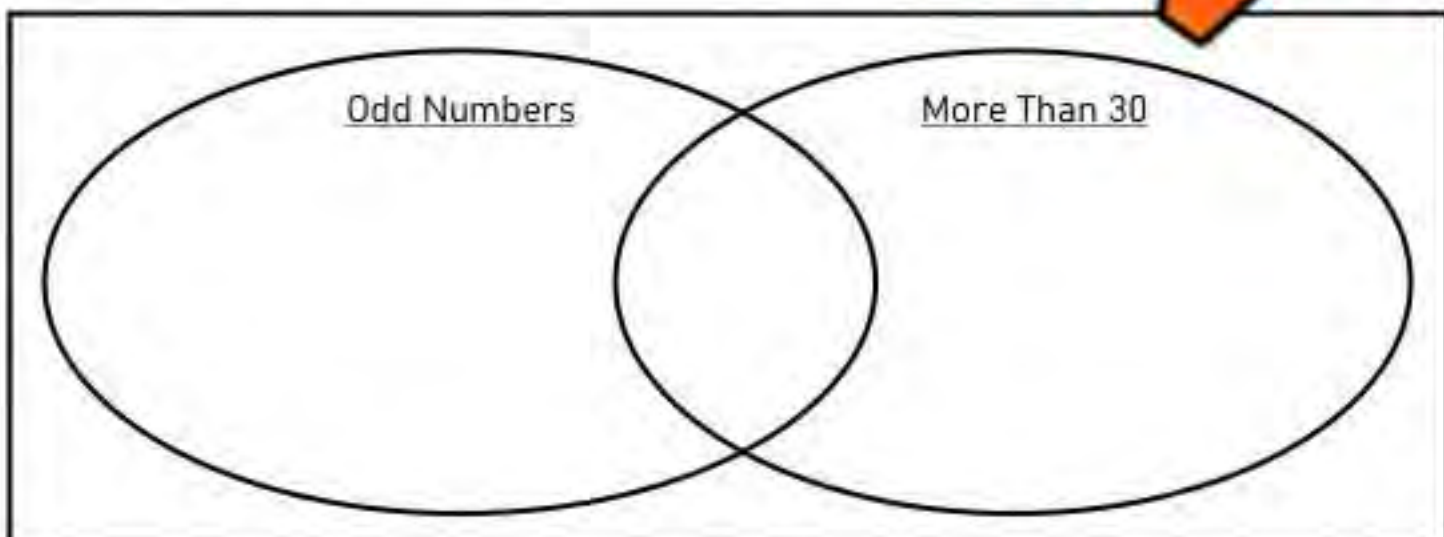
Part 2

Fill in the following table below

	Less Than 30	More Than 30	Total
Odd Numbers	4		
Even Numbers			
Total			

Part 3

Sort the numbers using the Venn Diagram



Name: _____

79

Sorting Numbers – Venn, Two-Way, Carroll

43	77	132	103	22
38	135	126	98	163

Part 1

Sort the numbers into the correct categories in the Carroll diagram

	Less Than 100	More Than 100
Odd		
Even Number		

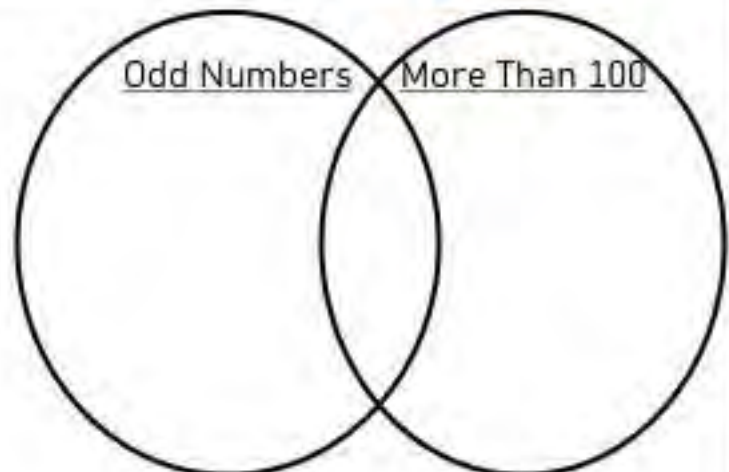
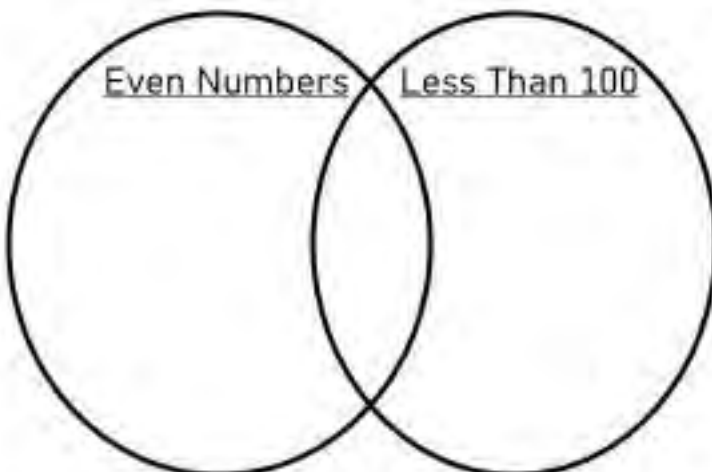
Part 2

Fill in the following table below

	Less Than 100	More Than 100	Total
Odd Numbers	2		
Even Numbers			
Total			

Part 3

Sort the numbers using the Venn Diagram



Name: _____

Sorting Food – Venn, Two-Way, Carroll



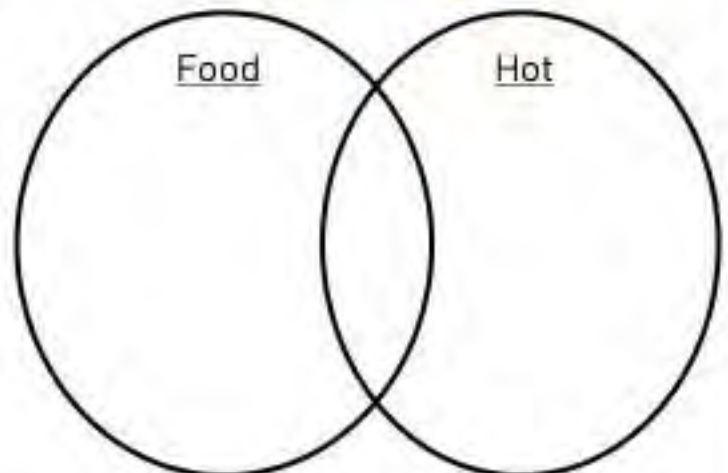
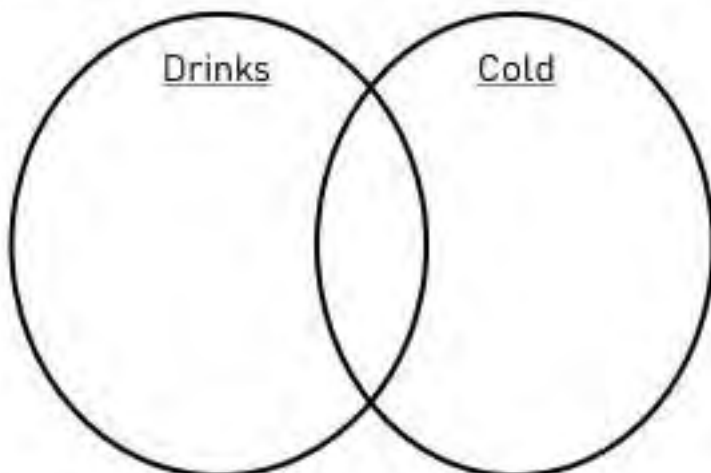
Part 1 Sort the food/drinks into the correct categories in the Carroll diagram

	Food	Drink
Cold		

Part 2 Fill in the two-way table below

	Food	Drink	Total
Hot	3		
Cold			
Total			

Part 3 Sort the food and drinks using the Venn Diagrams



Collecting Data – Carrol Diagram

Directions Survey your classmates using the survey question and fill in the Carrol Diagram

Survey Question: Do you prefer chocolate or vanilla ice cream? Do you prefer your ice cream in a cone or in a bowl?

Type of Ice Cream	Type of Ice Cream Treat	
	Chocolate	Vanilla
Cone		
Bowl		



Part 2

Fill in the following table below

	Chocolate	Vanilla	Total
Cone			
Bowl			
Total			

- How many people participated in the survey? _____
- Which type of ice cream is the most popular? _____
- Which type of ice cream is the least popular? _____
- What did you learn about the data?

Quiz – Carroll and Venn Diagram

Part 1

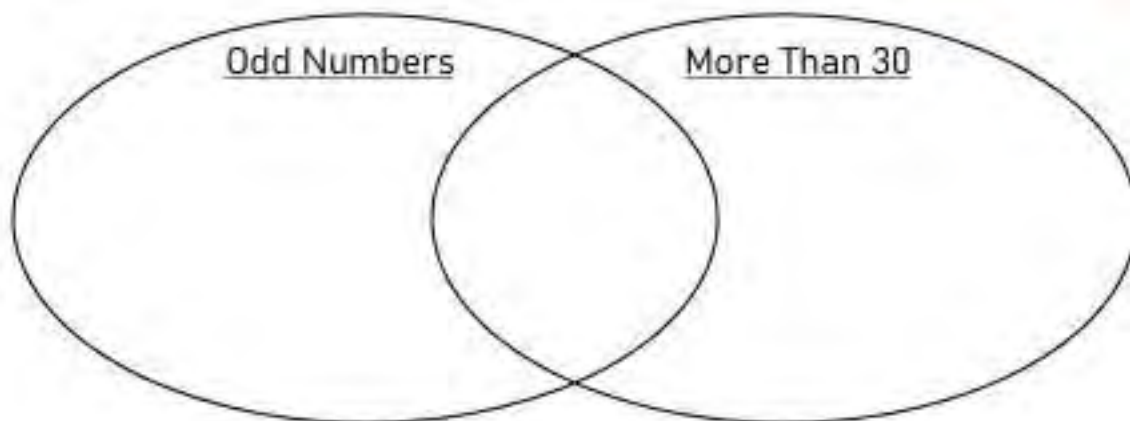
Sort the numbers into the correct categories in the Carroll Diagram

22	36	13	75	56
25	41	27	47	1

	Less Than 30	More Than 30
Odd Number		
Even Numbers		

Part 2

Sort the numbers using the Venn Diagram



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) $1 + 10$	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) $12 \div 4 = 3$	Expression	Equation
8) 50	Expression	Equation
9) $100 \div n + 3$	Expression	Equation
10) $\frac{25}{n} + 10 = 15$	Expression	Equation
11) $\frac{40 - 8}{n}$	Expression	Equation
12) $65 + 3 - n \div 10$	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 pattern has the following rule:</p> $3n - 1$	Equation	Expression
<p>3) Maria wants to run 22 km this week. She has already run 22 km.</p> $22 + 22 = 44$	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:</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.



$$\boxed{3} + \boxed{6} = \boxed{9}$$

Question: How many balls do you need to add to balance the scales?



$$\boxed{8} + \boxed{} = \boxed{11}$$



$$\boxed{6} + \boxed{} = \boxed{}$$



$$\boxed{8} + \boxed{} = \boxed{14}$$



$$\boxed{5} + \boxed{} = \boxed{9}$$



$$\boxed{7} + \boxed{} = \boxed{12}$$



$$\boxed{2} + \boxed{} = \boxed{13}$$



$$\boxed{6} + \boxed{} = \boxed{10}$$



$$\boxed{3} + \boxed{} = \boxed{14}$$



$$\boxed{1} + \boxed{} = \boxed{12}$$

Addition – Are They Equal?

Are the equations equal? Put a slash through the equal sign for any equations that are not equal

$5 + 3 = 8$

$21 + 10 \neq 30$

$17 + 11 = 28$

Questions

Put a slash through the equal sign (\neq) if it is not balanced

	2) $20 + 10 = 30$	3) $36 + 5 = 41$
4) $23 + 6 = 30$	5) $12 + 13 = 40$	6) $10 + 40 = 50$
7) $41 + 9 = 49$	8) $15 + 7 = 50$	9) $38 + 7 = 45$
10) $28 + 12 = 30$	11) $34 + 11 = 45$	12) $15 + 15 = 28$
13) $36 + 14 = 50$	14) $28 + 14 = 32$	15) $46 + 3 = 49$
16) $18 + 20 = 48$	17) $42 + 8 = 50$	18) $16 + 16 = 31$
19) $20 + 30 = 45$	20) $39 + 9 = 48$	21) $22 + 23 = 44$

Pre-Algebra – Balancing Addition Equations

Balancing equations means both sides of the equal sign must be the same.

$$\begin{array}{c} 10 \\ \wedge \\ 3 + 7 = \boxed{10} \end{array}$$

Examples:

$$\begin{array}{c} 30 \\ \wedge \\ 24 + 6 = \boxed{30} \end{array}$$

Questions

Fill in the missing number to balance the equation

1) $15 + \boxed{} =$

2) $23 + 6 = \boxed{}$

3) $34 + 5 = \boxed{}$

4) $12 + \boxed{} = \boxed{} = 28$

6) $26 + \boxed{} = 40$

7) $\boxed{} + 6 = 28$

8) $\boxed{} + 17 = 37$ $\boxed{} + 33 = 50$

10) $35 + 13 = \boxed{}$

11) $22 + \boxed{} = 32$ $\boxed{} + 10 = 40$

13) $24 + \boxed{} = 31$

14) $26 + 12 = \boxed{}$

15) $40 + \boxed{} = 50$

16) $26 + \boxed{} = 42$

17) $35 + 15 = \boxed{}$

18) $13 + \boxed{} = 25$

19) $44 + \boxed{} = 52$

20) $18 + 22 = \boxed{}$

21) $41 + \boxed{} = 50$

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 12 beads. How many beads were on Thomas's necklace initially?	
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 and 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)

$17 + 8$

$22 + 4$

$13 + 12$

2)

$16 + 12$

 2

$15 + 14$

3)

$21 + 8$

$19 + 11$

$17 + 12$

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) $67 + \triangle = 111$ $\triangle =$	2) $33 + \text{yellow circle} = 58$ $\text{yellow circle} =$	3) $\text{blue circle} + 61 = 97$ $\text{blue circle} =$
4) $47 + \text{blue diamond} = 82$ $\text{blue diamond} =$	5) $\text{green triangle} + 29 = 76$ $\text{green triangle} =$	6) $72 + \text{red circle} = 105$ $\text{red circle} =$
7) $\text{orange diamond} + 105 = 150$ $\text{orange diamond} =$	8) $140 + \text{blue diamond} + 172 = 181$ $\text{blue diamond} =$	

Part 2

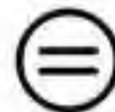
Write your own questions using any symbol you want. Then get a friend to answer.

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

$n + 5 = 12$ $n =$	$n + 5 = 12$ $n =$	$22 + n = 30$ $n =$
$18 + 12 = p$ $p =$	$18 + 12 = p$ $p =$	$p + 13 = 30$ $p =$
$15 + y = 30$ $y =$	$y + 14 = 30$ $y =$	$15 + 35 = y$ $y =$
$38 + t = 45$ $t =$	$14 + t = 33$ $t =$	$40 + t = 30$ $t =$
$14 + a = 22$ $a =$	$35 + a = 50$ $a =$	$50 + a = 50$ $a =$
$12 + 16 = s$ $s =$	$21 + s = 43$ $s =$	$33 + s = 46$ $s =$

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 sheet of paper
- Dry erase marker or pen
- Set of simple word problems on cards
- Tokens or stickers

Instructions

How you will complete the activity.

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 (addition and multiplication) and include a place for an unknown value, like "Sam has some apples. He bought some more and now he has 8. 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 had 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 paper. She got 3 more to share with her brother, and now they have 12 pieces together. How many pieces did Ella have initially?

Noah had some balloons. 4 more balloons were brought to him at the party, and now he has 10 balloons. How many balloons did Noah have with?

Sophia had some pencils. She won 5 more pencils as a prize, and now she has 18 pencils. How many pencils did Sophia have at first?

Liam had some cookies. He made 8 more cookies with his grandmother, 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?

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

Part Part Whole – Numbers to 100**Questions**

How do the parts below equal the whole at the top

1)

44	
10	

 $\text{_____} + 10 = 44$

2)

61	
	8

 $\text{_____} + 8 = 61$

3)

47	

 $\text{_____} + 7 = 47$

4)

54	
23	31

 $23 + 31 = \text{_____}$

5)

53	
39	

 $39 + \text{_____} = 53$

6)

76	

 $\text{_____} + \text{_____} = 76$

7)

61	
43	18

 $43 + 18 = \text{_____}$

8)

82	
22	

 $22 + \text{_____} = 82$

9)

93	
15	

 $15 + \text{_____} = 93$

10)

91	
67	24

 $67 + 24 = \text{_____}$

Part Part Part Whole – Numbers to 20**Questions**

How do the parts below equal the whole at the top

1)

12		
3	5	

2)

11		
	2	6

3)

5		

4)

5	5	5

5)

15		
7		4

6)

2		6

7)

10	4	3

8)

17		
11		4

9)

19		
6	6	

10)

20		
11		6

Part Part Part Whole – Numbers to 100

Questions

How do the parts below equal the whole at the top

1)

18		
6	6	

$$= 18$$

2)

25		
	10	8

$$+ 10 + 8 = 25$$

3)

7		

$$7 + + 15 =$$

4)

13	15	8

$$13 + 15 + 8 =$$

5)

57		
11	18	

$$11 + 18 + = 57$$

6)

2		17

$$25 + 17 =$$

7)

23	18	25

$$23 + 18 + 25 =$$

8)

78		
35		24

$$35 + + 24 = 78$$

9)

86		
61		15

$$61 + + 15 = 86$$

10)

99		
22		44

$$22 + + 44 = 99$$

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 love baking cookies. Rebecca made 20 cookies. They made 50 total cookies. Which equation will tell us how many cookies Jen made?

$j + 20 = 50$	$50 + c = 20$
$20 + j = 50$	$c - 20 = 50$



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 both 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 for beating level 1 in 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?



$$11 - \square = 8$$



$$8 - \square = 5$$



$$10 - \square = 4$$



$$8 - \square = 1$$



$$11 - \square = 3$$



$$13 - \square = 2$$



$$10 - \square = 4$$



$$14 - \square = 1$$



$$4 - \square = 0$$

Subtraction – Are They Equal?

Are the equations equal? Put a slash through the equal sign for any equations that are not equal

$7 - 2 = 5$

$25 - 6 \neq 18$

$15 - 11 = 4$

Questions

Put a slash through the equal sign (\neq) if it is not balanced

	2) $12 - 4 = 6$	3) $16 - 3 = 13$
4) $25 - 8 = 1$	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) $17 - 3 = 12$
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:

$$\begin{array}{c} 9 \\ \wedge \\ 15 - 6 = \boxed{9} \end{array}$$

$$\begin{array}{c} 21 \\ \wedge \\ 27 - 6 = \boxed{21} \end{array}$$

Questions

Fill in the missing number to balance the equation

1) 15 - 2) 11 - 6 = 3) 10 - 5 = 4) 10 - = 55) - 6 = 66) 14 - = 107) - 6 = 108) - 5 = 129) - 8 = 1210) 35 - 10 = 11) 52 - = 4012) - 7 = 4513) 24 - = 1714) 28 - 6 = 15) 18 - = 1616) 43 - = 3517) 45 - 15 = 18) 25 - = 1019) 46 - = 3120) 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	After giving away 7 pencils to classmates, there are 10 left. How many pencils were in the box originally?	
3	There were 28 balloons. After a certain number of balloons popped, and now there are 15 balloons left. How many balloons popped?	
4	Alex had x dollars saved up. He bought a book for \$4. Now he has \$9 left. How much money did Alex have at first?	
5	Chloe has 13 storybooks. She donates n number of books to a library and still has 7 books. How many books did Chloe have at first?	
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?	

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)

$27 - 9$

$21 - 9$

$19 - 6$

2)

$33 - 11$

$20 - 8$

$30 - 8$

3)

$41 - 7$

$50 - 13$

$48 - 13$

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)

$$51 - \blacktriangle = 29$$

$$\blacktriangle =$$

3)

$$95 - \bullet = 65$$

$$\bullet =$$

4)

$$42 - \blacktriangle =$$

$$\blacktriangle =$$

5)

$$\blacklozenge - 20 = 47$$

$$\blacklozenge =$$

6)

$$120 - 70 = \blacklozenge$$

$$\blacklozenge =$$

7)

$$133 - \blacktriangle = 70$$

$$\blacktriangle =$$

9)

$$189 - \bullet = 151$$

$$\bullet =$$

Part 2

Write your own questions using any symbol you can get and to 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) $\bullet - 56 = 8$
 $\bullet =$
- 2) $39 - \blacktriangle = 29$
 $\blacktriangle =$
- 3) $76 - 25 = \blacklozenge$
 $\blacklozenge =$
- 4) $183 - 32 = \bullet$
 $\bullet =$

Name: _____

Find out the value of the symbol.

- 1) $\bullet - 56 = 8$
 $\bullet =$
- 2) $39 - \blacktriangle = 29$
 $\blacktriangle =$
- 3) $76 - 25 = \blacklozenge$
 $\blacklozenge =$
- 4) $183 - 32 = \bullet$
 $\bullet =$

Name: _____

Find out the value of the symbol.

- 1) $\bullet - 56 = 8$
 $\bullet =$
- 2) $39 - \blacktriangle = 29$
 $\blacktriangle =$
- 3) $76 - 25 = \blacklozenge$
 $\blacklozenge =$
- 4) $183 - 32 = \bullet$
 $\bullet =$

Name: _____

Find out the value of the symbol.

- 1) $\bullet - 56 = 8$
 $\bullet =$
- 2) $39 - \blacktriangle = 29$
 $\blacktriangle =$
- 3) $76 - 25 = \blacklozenge$
 $\blacklozenge =$
- 4) $183 - 32 = \bullet$
 $\bullet =$

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

$18 - n = 5$ $n =$	$n - 5 = 5$ $n =$	$22 - n = 10$ $n =$
$25 - 10 = p$ $p =$	1	$p - 8 = 15$ $p =$
$31 - y = 30$ $y =$	$y - 14 =$ $y =$	$5 - 35 = y$ $y =$
$65 - t = 50$ $t =$	$28 - t = 20$ $t =$	5 $t =$
$24 - a = 17$ $a =$	$50 - a = 30$ $a =$	$63 - a = 50$ $a =$
$76 - 30 = s$ $s =$	$62 - s = 22$ $s =$	$51 - s = 39$ $s =$

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 left. Which equation tells us how many logs they burned?

$$b - 18 = 4$$

$$18 - 4 = b$$

$$4 - b = 18$$

$$4 - b = 18$$



3) Tom collected 73 shells on the beach. He gave 13 to his sister. Now he has 60 shells left. Which equation tells us how many shells he gave to his sister?

$$73 - s = 60$$

$$73 - 60 = s$$

$$s - 60 = 73$$

$$73 - 60 = s$$

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 and bought a new toy for 26 dollars. How many dollars does he have left?



Bonus: He saved 15 more dollars. Can he buy a new game for 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 bottles (one per pair/group) filled to approximately one-third with water (or use cups)
- Set of subtraction algebra question cards
- Answer sheet for each group

Instructions

How you will complete the activity.

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 and 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 tries to solve the subtraction algebra problem.
5. Once they believe they have the correct answer, they write it down on their 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

$x - 4 = 12$

$y - 3 = 15$

$z - 2 = 20$

$a - 5 = 25$

$b - 6 = 24$

$c - 7 = 23$

$d - 8 = 32$

$e - 9 = 41$

$r - 6 = 54$

$s - 5 = 55$

$t - 7 = 73$

$u - 8 = 82$

$v - 12 = 48$

$w - 11 = 49$

$x - 13 = 87$

$y - 14 = 86$

$z - 1 = 98$

$a - 1 = 99$

$b - 2 = 98$

$c - 3 = 97$

Sam had 30 marbles and lost some. Now he has 15. How many did he lose?

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?

Nora had 45 beads and broke some. Now she has 30. How many did she break?

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 the beginning?

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 49 flew away, how many are left? How many more bees would there be if there were 100 more bees, and 49 flew away?

If you have 100 coins, spend 14 and 86 remain. How many were spent?

Start with 100 toys, donate 41 and 41 are left. How many were donated?

If there are 100 days left of school, and 13 pass, 13 are left. How many days have gone by?

There are 100 marbles, 33 go missing, and 66 are left. How many went missing?

If you have 100 pencils, and 49 broke, 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
 $z - 5 = 55$?

Name: _____

120

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

$2 \times 2 \neq 5$

$3 \times 3 = 9$

$5 \times 2 \neq 11$

Questions

Put a slash through the equal sign (\neq) if it is not balanced

1) $2 \times 2 = 4$	2) $10 \times 3 = 30$	3) $2 \times 3 = 5$
4) $5 \times 5 = 25$	5) $2 \times 2 = 8$	6) $3 \times 5 = 16$
7) $10 \times 2 = 12$	8) $5 \times 5 = 50$	9) $5 \times 4 = 20$
10) $10 \times 10 = 90$	11) $2 \times 7 = 14$	12) $2 \times 11 = 22$
13) $10 \times 4 = 40$	14) $5 \times 1 = 10$	15) $10 \times 6 = 16$
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) 5×2

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) $5 \times \blacktriangle = 45$

3) $4 \times \bullet = 32$

$\blacktriangle =$

$\bullet =$

4) $\blacktriangle \times 9 =$

5) $\blacklozenge \times 4 = 44$

6) $7 \times 10 = \blacklozenge$

$\blacktriangle =$

$\blacklozenge =$

$\blacklozenge =$

7) $2 \times \blacktriangle = 60$

9) $10 \times \bullet = 150$

$\blacktriangle =$

$\bullet =$

$\bullet =$

Part 2

Write your own questions using any symbol you want. Give your friend an answer.

1)

2)

3)

4)

Multiplication – Find the Variable

When we multiply a number by a variable, we do not need to use the multiplication sign. It is known that any variable next to a number means the operation we are using is multiplication.

Example: $5n = 15$ means $5 \times n = 15$

We can figure out the unknown number by balancing the equation: $n = 3$.



Question

Find out the value of the variable

	$n \times 5 = 20$ $n =$
$10 \times 1 = p$ $p =$	$5p = 30$ $p =$
$10n = 30$ $n =$	$n =$
$2n = 16$ $n =$	$8 \times 5 = t$ $t =$
$5n = 45$ $n =$	$10n = 100$ $n =$
$10s = 50$ $s =$	$5 \times 7 = s$ $s =$

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 variable.

1) $9 \times 7 = t$

t =

2) $4n = 44$

n =

3) $8 \times 5 = t$

t =

4) $6n = 42$

n =

Name: _____

Find out the value of the variable.

1) $9 \times 7 = t$

t =

2) $4n = 44$

n =

3) $8 \times 5 = t$

t =

4) $6n = 42$

n =

Name: _____

Find out the value of the variable.

1) $9 \times 7 = t$

t =

2) $4n = 44$

n =

3) $8 \times 5 = t$

t =

4) $6n = 42$

n =

Name: _____

Find out the value of the variable.

1) $9 \times 7 = t$

t =

2) $4n = 44$

n =

3) $8 \times 5 = t$

t =

4) $6n = 42$

n =

Using Variables to Solve Multiplication Equations

There are some instances where we know the values of variables and need to plug them into an equation. For example:

$$ab = c$$

$$a = 5$$

$$b = 2$$

$$5 \times 2 = c$$

$$c = 10$$



Question

Find out the value of the variable

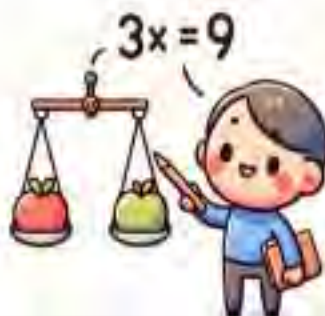
$ab = c$ $a = 5$ _____ x _____ = c $c =$	$en = f$ $e = 10$ $n = 4$ _____ x _____ = f $f =$
$ry = k$ $r = 3$ $y = 4$ _____ x _____ = k $k =$	$gh = h$ $t = 10$ $g = 6$ _____ x _____ = h $h =$
$ab = c$ $a = 5$ $b = 5$ _____ x _____ = c $c =$	$en = f$ $e = 6$ $n = 4$ _____ x _____ = f $f =$
$ry = k$ $r = 4$ $y = 2$ _____ x _____ = k $k =$	$tg = h$ $t = 10$ $g = 6$ _____ x _____ = h $h =$
$ab = c$ $a = 7$ $b = 5$ _____ x _____ = c $c =$	$en = f$ $e = 4$ $n = 5$ _____ x _____ = f $f =$
$ry = k$ $r = 5$ $y = 7$ _____ x _____ = k $k =$	$tg = h$ $t = 7$ $g = 2$ _____ x _____ = h $h =$

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 you will need for the activity.

- Small white sheets of paper
- Dry erase marker or pen
- 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 symbol x stands for 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.

$12a = 36$

$11b = 44$

$15c = 45$

$13d = 52$

$14e = 56$

$16f = 64$

$17h = 68$

$19i = 76$

$12j = 48$

$18k = 39$

$11l = 33$

$15m = 60$

$20n = 80$

$21o = 63$

$22p = 66$

$25q = 75$

$24r = 72$

$23s = 46$

$19t = 57$

$16v = 64$

$17w = 51$

$14x = 42$

$13y = 39$

$21z = 84$

$22a = 44$

$20b = 100$

$12c = 36$

$15d = 75$

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) $8 \div \boxed{} = \boxed{}$

2) $6 \div 3 = \boxed{}$

3) $10 \div \boxed{} = 5$

4) $6 \div \boxed{} = 2$

5) $\boxed{} \div 5 = 5$

6) $\boxed{} \div 2 = \boxed{}$

7) $5 \div 1 = \boxed{}$

8) $20 \div \boxed{} = \boxed{}$

9) $15 \div \boxed{} = 3$

10) $10 \div 10 = \boxed{}$

11) $25 \div \boxed{} = 5$

12) $30 \div 6 = \boxed{}$

13) $10 \div \boxed{} = 2$

14) $18 \div 2 = \boxed{}$

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)

$10 \div 7$

$5 \div 1$

$12 \div 6$

2)

$6 \div 3$

$10 \div 2$

$12 \div 6$

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)

$$\blacktriangle \div 2 =$$

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 want. Give your friend an 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: $n = 5$.



Questi

Find out the value of the variable

$n \div 5 = 3$ $n =$	$n \div 5 = 3$ $n =$
$10 \div 1 = p$ $p =$	$20 \div p = 2$ $p =$
$10 \div n = 2$ $n =$	$5 \div n = 2$ $n =$
$30 \div n = 10$ $n =$	$8 \div t = 2$ $t =$
$50 \div n = 5$ $n =$	$10 \div n = 10$ $n =$
$10 \div s = 2$ $s =$	$20 \div 4 = s$ $s =$

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) $36 \div 6$

36					

4) $80 \div 10$

80							

5) $24 \div 4$

24			

6) $30 \div 5$

30					

7) $42 \div 7$

42					

8) $72 \div 9$

72							

9) $49 \div 7$

49						

10) $48 \div 4$

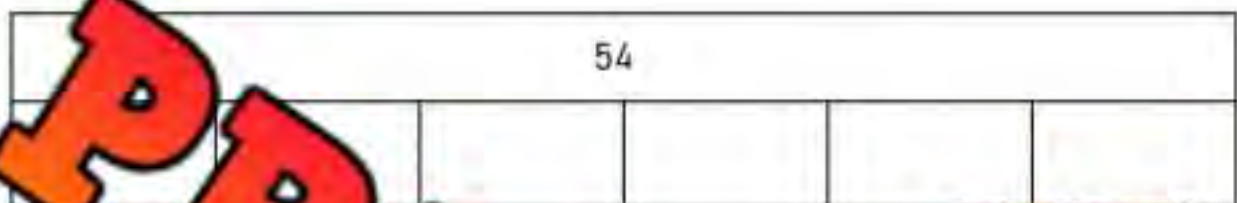
48			

Division Word Problems – Bar Model

Questions

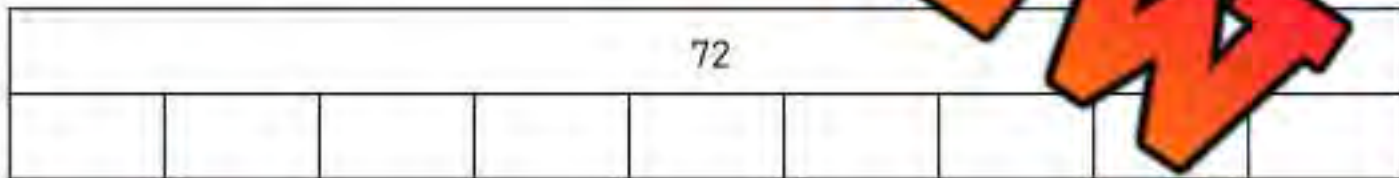
Use the bar model to answer the division questions below

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 making a budget 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

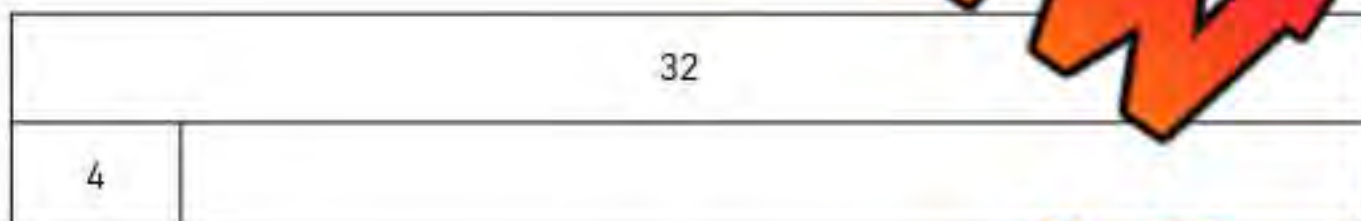
Use the bar model to answer the division questions below

- 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 _____ of _____ 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

_____ 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	$3m - 5 = 7$. Solve for m . 4	Sophia's sister is 30 years old. She is 4 years older than twice Sophia's age. How old is Sophia? 13
$6q = 18$. 3	What is k ? 4	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	$w + 5 = 11$. What is w ? 6	The number is 7. 7	$c - 8 = 8$. Find c . 16	There are 28 apples in a basket. The number of apples is 4 times the number of oranges. How many oranges are there? 7
$7s = 42$. Solve for s . 6	$t - 4 = 5$. Find t . 9	$3j$ is 27. What is j ? 9	What is m ? 5	Mia has twice as many cars as Oliver. If the total number of cars is 18, how many cars does Oliver have? 3
$8a = 56$. Find a . 7	$u + 6 = 15$. What is u ? 9	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 ? 16	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

Exit Cards

Cut Out

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

Name: _____

Solve each side of the equation and label it = (equality) or \neq (inequality).

- 1) $25 + 3$ $7 + 21$
- 2) $42 + 16$ $20 + 36$
- 3) $36 - 7$ $42 - 13$
- 4) $19 - 11$ $39 - 21$
- 5) $52 - 16$ $33 - 3$

Name: _____

Solve each side of the equation and label it = (equality) or \neq (inequality).

- 1) $25 + 3$ $7 + 21$
- 2) $42 + 16$ $20 + 36$
- 3) $36 - 7$ $42 - 13$
- 4) $19 - 11$ $39 - 21$
- 5) $52 - 16$ $33 - 3$

Name: _____

Solve each side of the equation and label it = (equality) or \neq (inequality).

- 1) $25 + 3$ $7 + 21$
- 2) $42 + 16$ $20 + 36$
- 3) $36 - 7$ $42 - 13$
- 4) $19 - 11$ $39 - 21$
- 5) $52 - 16$ $33 - 3$

Name: _____

Solve each side of the equation and label it = (equality) or \neq (inequality).

- 1) $25 + 3$ $7 + 21$
- 2) $42 + 16$ $20 + 36$
- 3) $36 - 7$ $42 - 13$
- 4) $19 - 11$ $39 - 21$
- 5) $52 - 16$ $33 - 3$

Solve Equations – Guess and Check

When we are trying to figure out the value of a variable, we can use the guess and check method. First, we make a reasonable guess as to what the value of the variable could be. Second, we solve the equation using this guess. If our answer is too high, then we use a smaller number. If it is too low, we choose a lower number.

Questions

Find the value of the variable using the guess and check method

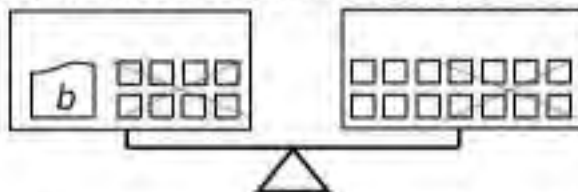
#	Equation	Guess	Calculate	Answer
Ex	$3n = 21$	6 7	$3 \times 6 = 18$ (too low) $3 \times 7 = 21$ (right on)	7
1	$4m = 32$			
2	$3 + w = 17$			
3	$33 = b + 17$			
4	$2 \times m + 1 = 19$			
5	$19 = 3 \times L - 2$			

Solve Equations – Balance Model

When we are trying to figure out the value of a variable, we can use a balance scale. Whatever we do to one side of the balance, we need to do the same to the other side.

Example $b + 8 = 14$

We can figure out the value of b by isolating it. This means we want b to be on its own. If we take 8 boxes away from the left side, we need to take 8 away from the right side as well. This will leave us with $b = 6$.



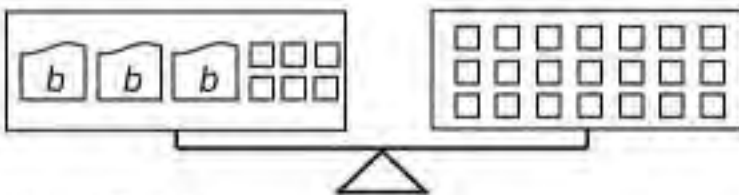
Question Solve for the value of the variable using the balance model

#	Equation	Balance Model	Answer
1	$7 + m = 18$		
2	$2 + t = 16$		
3	$15 = 2 + b + 6$		
4	$4 + n + 1 = 22$		

Solve Equations – Balance Model

When an equation has multiplication, we can still use the balance model. Check out the example below.

Example $3b + 6 = 21$



There are three groups of the variable b . To isolate the variable:

- 1) We need to subtract the 6 from the left side.
- 2) Next, we need to subtract the 6 from the right side. Our equation can now be represented as $3b = 15$.
- 3) We need to isolate the variable b by itself. Since division is the opposite of multiplication, we need to divide the $3b$ by 3 to isolate it.
- 4) Whatever we do to one side, we need to do to the other. Therefore, we need to divide the right side by 3. In the end, we get $b = 5$.

Questions

Use the balance model to solve for the value of the variable using the balance model

#	Equation	Balance Model	Answer
1	$2b + 8 = 22$		
2	$4n + 8 = 20$		
3	$25 = 3t - 5$		
4	$17 = 2m + 5$		

Solve Equations Using Number Sense/Reasoning

For some mathematicians, solving equations might not require the guess and check method or the drawing of a balance model. Instead, some are able to use their number sense and reasoning skills to solve the problem.

Example:

$$25 + 5a = 50$$

$$25 + 5a = 50 - 25$$

$$5a = 25$$

$$5a \div 5 = 25 \div 5$$

$$a = 5$$

Question

Use the reasoning above to solve the equations below.

#	Equation
1	
2	$15 + m = 24$
3	$29 = a - 7$
4	$3b = 12$
5	$2y + 32 = 46$

#	Equation
6	$m + 37 = 50$
7	$49 = 5t - 1$
8	
9	$6n + 12 = 24$
10	$2m + 1 = 19$

Word Problems - Solving Equations

Questions

Solve the problems below



1) Camila had some markers and then bought 24 more. Now she has 56 markers. How many markers did she have before she bought more?

Workspace**Equation**

2) There are two boxes of muffins. Both boxes have the same number of muffins. One box has 12 chocolate chip muffins and 6 blueberry muffins. The other box has 6 bran muffins and some oatmeal muffins. How many oatmeal muffins are there?

Workspace**Equation**

3) Caleb scored a bunch of points in the first quarter of a basketball game. In the second quarter, he had 5 points. In the third quarter, he had 8 points and in the fourth quarter, he had 3 points. At the end of the game, he finished with 31 points. How many points did he score in the first quarter?

Workspace**Equation**

Word Problems - Solving Equations

Questions

Solve the problems below



1) Hunter's cousin is 24 years old. He is 2 years older than twice Hunter's age. How old is Hunter?

Workspace

Equation

2) Cindy has \$8. Her sister has 3 times as much as her brother. The three of them have \$44. How much money does her sister have?

Workspace

Equation

3) Carson earned \$50 from work today. He worked for 5 hours and received a bonus of \$15. How much does he earn per hour?

Workspace

Equation

Algebra Quiz - Equations**Part 1**Put a slash through the equal sign (\neq) if it is not balanced

1) $15 + 10 = 25$

2) $40 + 10 = 50$

3) $46 - 5 = 42$

4) $18 \div 3 = 6$

5) $6 \times 4 = 22$

6) $30 \div 3 = 10$

Part 2

Write in 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

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 |

- 1) Spencer has 24 marbles. He gives 4 marbles to each of his friends. How many friends got marbles from Spencer?

24

- 2) Sam has 175 stickers. He gives some stickers to his friends. Now he has 141 stickers. How many stickers did he give away?

- 3) Ryder had some hockey cards and then bought some more. Now he has 45 hockey cards. How many hockey cards did he have before he bought more?

- 4) Jesse brought 32 treats to work and gave them all away. She gave 8 to her boss and 2 to each of her friends. How many friends did she give treats to?



Grade 4

Shape and Space



	Curriculum Expectations	Pages
SS4.1	Demonstrate an understanding of time by: <ul style="list-style-type: none">• reading and recording time using digital and analog clocks (including 24 hour clocks)• reading and recording calendar dates in a variety of formats.	5 - 68
SS4.2	Demonstrate an understanding of area of regular and	69 - 108
Preview of 125 pages from this product that contains 297 pages total.		
SS4.3	Demonstrate an understanding of rectangular and triangular prisms by: <ul style="list-style-type: none">• identifying common attributes• comparing• constructing models.	111 - 136
SS4.4	Demonstrate an understanding of line symmetry by: <ul style="list-style-type: none">• identifying symmetrical 2- D shapes• creating symmetrical 2- D shapes• drawing one or more lines of symmetry in a 2-D shape.	137 - 164
Unit Tests	Quizzes and Assessments	69 - 71, 109 - 110, 165 - 166

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 many minutes have gone by?

Start Time	End Time	How Much Time Has Passed?	
		Hours	Minutes
5:00	8:15	3	15
2:30	5:47		
5:00			
4:02	10:12		
6:28	10:45		
2:00	9:59		
6:35	11:48		

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?	
		Minutes	Seconds
4 : 11 : 16	4 : 24 : 45	13	29
5 : 01 : 12	5 : 08 : 28		
8 : 21 : 08	8 : 29 : 09		
6 : 34 : 36	6 : 59 : 11		
7 : 14 : 32	7 : 22 : 55		
1 : 37 : 35	1 : 52 : 53		
3 : 27 : 14	3 : 39 : 35		

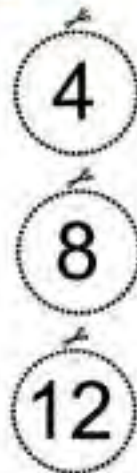
Name: _____

9

Making a Clock

Directions

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



Name: _____

10

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

Label the clocks and determine how many hours have gone by?

Start Time	End Time	How Much Time Has Passed?
1)  <input type="text"/> : <input type="text"/>	 <input type="text"/> : <input type="text"/>	_____ Hours
2)  <input type="text"/> : <input type="text"/>	 <input type="text"/> : <input type="text"/>	_____ Hours
3)  <input type="text"/> : <input type="text"/>	 <input type="text"/> : <input type="text"/>	_____ Hours
4)  <input type="text"/> : <input type="text"/>	 <input type="text"/> : <input type="text"/>	_____ Hours

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)



Drawing Clocks – Half Past**Part 1**

Draw the hour hand on the clocks below to show the correct time

1)



9:30

2)



9:30

3)



1:30

4)



7:30

Part 2

Draw the minute hand on the clocks below to show the correct time

1)



2:30

2)



12:30

3)



11:30

4)



6:30

Drawing Clocks – Half Past**Questions**

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

1)



2)



2:30

3)



5:30

4)



10:30

5)



1:30

6)



4:30

7)



8:30

8)



7:30

Math Activity: Time Travelers

Objective

What are we learning about?

To help students learn to read analog clocks and calculate elapsed time between two events.

Materials

What you will need for the activity.

- Paper plates
- Markers
- Scissors
- Brass paper fasteners
- Worksheets with clock faces



Instructions

How you will complete the activity.

1. Distribute one paper plate to each student to use as a clock face.
2. Instruct students to write the numbers 1 through 12 in appropriate places around the edge of the plate.
3. Have students cut out two arrows from paper — a longer one for the minute hand and a shorter one for the hour hand.
4. Show the students how to attach the clock hands to the center of the plate using a brass paper fastener, making sure the hands can move freely.
5. Demonstrate how to set the clock to a specific time, then show changing the time to demonstrate elapsed time.
6. Provide each student with a worksheet that contains various times and ask them to set their paper clock to start at the first time and then move the hands to the second time.
7. Discuss as a class how to figure out how many hours and minutes have passed between the two times.

Math Activity: Time Travelers**Questions**

Answer the questions below



	Word Problems	Answers
1	Set your paper clock to 3:00 PM. Move the hands to show 5:45 PM. How many hours and minutes have passed?	
2	If you start your homework at 4:30 PM and finish at 6:15 PM, how long did you spend on homework?	
3	Your soccer practice starts at 7:00 AM and ends at 8:30 AM. What is the duration of your soccer practice?	
4	If a movie begins at 7:00 PM and ends at 9:30 PM, how long is the movie?	
5	Suppose you go to bed at 8:00 PM and wake up at 6:00 AM the next day. How many hours did you sleep?	

PREVIEW

Telling Time – Quarter To, Quarter After



Quarter To

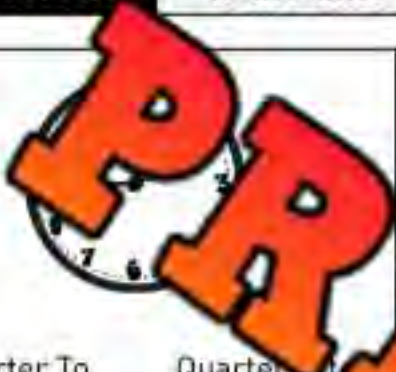


Quarter After

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

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

11)



Quarter To

Quarter After

12)



Quarter To

Quarter After

Drawing Clocks – Quarter To, Quarter After**Part 1**

Draw the hour hand on the clocks below to show the correct time

1)



9:15

2)



4:15

3)



3:15

4)



7:45

Part 2

Draw the minute hand on the clocks below to show the correct time

1)



9:15

2)



10:15

3)



8:45

4)



2:45

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

Telling Time – Every 5 Minutes**Questions**

Read the clock and write the time below

1)



2)



3)



4)



5)



6)



7)



8)



9)



10)



11)



12)



Telling Time – Multiple Choice**Questions**

Circle the time showing on the clock

1)

 09:50 11:50 09:55

2)

 02:30 06:10 01:30

3)

 01:40 01:45 01:40

4)

 11:25 11:50 05:55

5)

 07:45 09:35 06:45

6)

 09:25 05:35 05:35

7)

 03:45 02:40 08:15

8)

 10:30 03:45 10:15

Telling Time – Multiple Choice**Questions**

Write the letter from below under each clock

1)



2)



3)



4)



5)



6)



7)



8)



(A)

10 : 55

(B)

4 : 40

(C)

9 : 45

(D)

12 : 25

(E)

10 : 15

(F)

8 : 55

(G)

9 : 10

(H)

4 : 00

(I)

11 : 20

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?

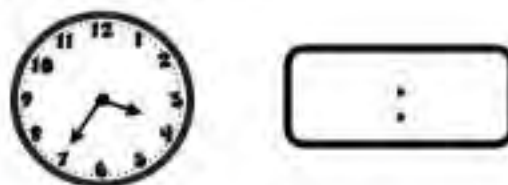


2) Draw the time on the clock: 5:15



Name: _____

1) What time is it?

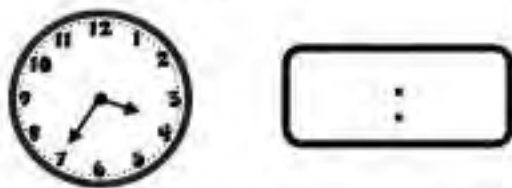


2) Draw the time on the clock: 5:15



Name: _____

1) What time is it?

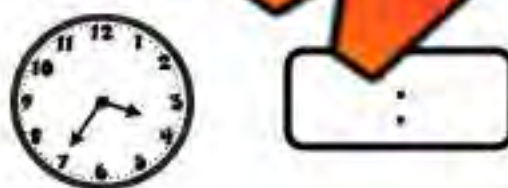


2) Draw the time on the clock: 5:15



Name: _____

1) What time is it?



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





Elapsed Time – Nearest Hour



Part 1



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

1)  

2)  

3)  



4)  



5)  



6)  



Part 2

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

1)  

2)  

3)  

4)  

Elapsed Time – Half Past

Part 1

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

1)



4hrs
30 mins

4:00

8:30

2)



12:00

6:30

3)



7:00

5:00

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)



:

:

Telling Time – Every Minute

Questions

Read the clock and write the time below

1)



2)



3)



4)



5)



6)



7)



8)



9)



10)



11)



12)



Telling Time – Every Minute**Questions**

Draw the hour and minute hands on the clocks below

1)



2)



6:37

3)



1:21

4)



9:08

5)



9:59

6)



10:42

7)



7:14

8)



12:39

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 cutting game cards with digital and analog clocks.
- Small bags or envelopes to hold the card sets 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.

Name: _____

36

Cards

Matching Game Cards

Analog Clock

Digital Clock



12:16



1:50



2:16



8:16



9:38

PREVIEW

Name: _____

37

Cards

Matching Game Cards

Analog Clock

Digital Clock



12:21



3:44



9:17



5:52



12:53

PREVIEW

Cards

Matching Game Cards

Analog Clock

Digital Clock



9:01



4:50



7:17



2:27



10:58

PREVIEW

Telling Time – Seconds**Questions**

What time is showing on the clock?

1)



2)



3)



5)



6)



Telling Time – Seconds**Questions**

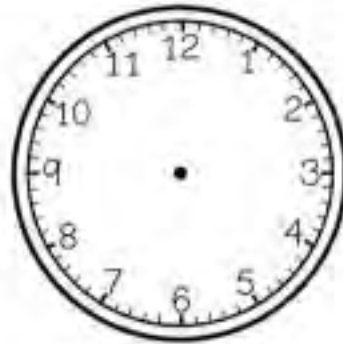
Draw the hour, minute, and second hands to represent the time

1)



2:10

2)



8:30:35

3)

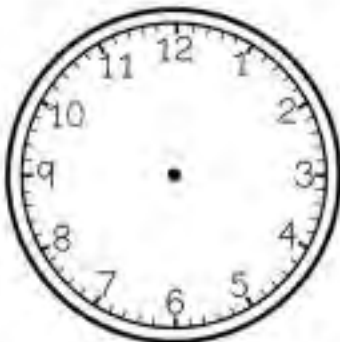


2:05:45



12

5)



7:55:10

6)



3:40:50

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.



4:28:35

Name: _____

1) What time is it?



2) Draw the time on the clock.



4:28:35

Name: _____

1) What time is it?



2) Draw the time on the clock.



4:28:35

Name: _____

1) What time is it?



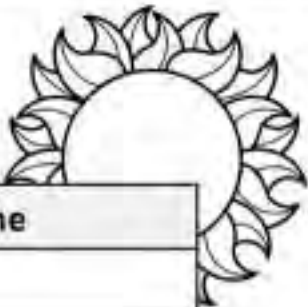
2) Draw the time on the clock.



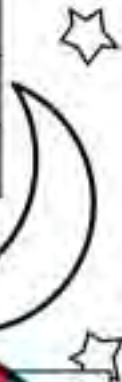
4:28:35

24 – Hour Clock**Part 1**

Convert the time by filling in the table



	24-Hour Time	12-Hour Time
1)	15:00	
2)	17:30	
3)	3:10	
4)		2:00pm
5)		8:15am
6)		10:00pm
7)		
8)		
9)		6:07pm
10)	7:57	


Part 2

Answer the questions below

	Questions	
1)	Hunter's plane leaves at 19:25. What time in AM/PM does Hunter's plane leave?	
2)	Stacey is taking a train at 4:45pm. What time in 24-hour time is the train leaving?	
3)	The baseball game is on at 10:15pm tonight. What time in 24-hour time is the game on at?	
4)	The surgery is planned for 15:27. What time is the surgery in 12-hour time?	
5)	The movie starts at 7:15pm. What time in 24-hour time is the movie starting?	







Time – AM and PM

AM	PM
<ul style="list-style-type: none"> An abbreviation of the Latin phrase ante meridiem (a.m.) Means before midday (before noon) 	<ul style="list-style-type: none"> An abbreviation of the Latin phrase post meridiem (p.m.) Means after midday (after noon)

Part 1 Circle the correct option

	Description	AM	PM
1)	We wake up at the...	AM	PM
2)	We have breakfast at...	AM	PM
3)	Steven goes to bed at...	AM	PM
4)	Dennis works every day at 8:30...	AM	PM
5)	Erica saw the stars in the sky...	AM	PM
6)	Charlie goes to school at...	AM	PM
7)	Ryan has basketball practice after school at...	AM	PM

Part 2 Fill in the time using a.m. or p.m.

<p>1) </p> <p style="text-align: center; border: 1px solid black; padding: 5px;">: am / pm</p>	<p>2) </p> <p style="text-align: center; border: 1px solid black; padding: 5px;">: am / pm</p>	<p>3) </p> <p style="text-align: center; border: 1px solid black; padding: 5px;">: am / pm</p>
<p>4) </p> <p style="text-align: center; border: 1px solid black; padding: 5px;">: am / pm</p>	<p>5) </p> <p style="text-align: center; border: 1px solid black; padding: 5px;">: am / pm</p>	<p>6) </p> <p style="text-align: center; border: 1px solid black; padding: 5px;">: am / pm</p>

24 – Hour Clock

Questions

How much time has gone by from the start to end time?

	Start Time	End Time	How Much Time Has Passed?	
			Hours	Minutes
1)	6 : 17	18 : 20	12	3
2)	16 : 1	22 : 45		
3)	10 : 32	1 : 1		
4)	5 : 26	11 : 55		
5)	9 : 15	17 : 33		
6)	2 : 22	21 : 49		
7)	15 : 18	23 : 41		

Math Activity: 24-Hour Time Challenge

Objective

What are we learning about?

To help students understand and practice converting times between 12-hour and 24-hour clock formats.

Materials

What you will need for the activity.

- A 24-hour conversion chart
- Flashcards with times written in 12-hour format
- Flashcards with times written in 24-hour format
- A buzzer or bell to signal correct answers
- A clock face (optional, for reference)



Instructions

How you will play the activity

1. Start by explaining the 24-hour clock format, using the clock face as a visual guide to show how times after noon are calculated (e.g., 1:00 PM is 13:00).
2. Introduce the flashcards, each showing a time in either 12-hour or 24-hour format.
3. Divide the class into two teams and explain that they will compete to convert the times correctly.
4. Place the flashcards face down on a table. A student from one team turns over a card and has to convert the time to the opposite format.
5. Use the buzzer or bell to signal when they believe they have the correct answer.
6. Award points for correct answers and provide the correct answer for incorrect or missed attempts.
7. Alternate turns between the teams, ensuring each student has at least one chance to participate.
8. Keep score and discuss any tricky conversions after each round.
9. Summarize key points at the end of the game, reinforcing the method to convert times, especially those crossing noon and midnight.

Flashcards

Cut out the times below to use for the activity.

12:00 AM

9:00 AM

1:00

10:00

3:00 AM

12:00 PM

04:00

6:00 AM

3:00 PM

07:00

16:00

PREVIEW

Flashcards

Cut out the times below to use for the activity.

6:00 PM

2:45 AM

PREVIEW

05:25

9:00 PM

7:05 AM

22:00

11:15 PM

10:35 AM

23:30

12:50

Flashcards

Cut out the times below to use for the activity.

1:20 PM

9:30 PM

PREVIEW

2:45

21:55

4:55 PM

11:00 PM

18:10

7:40 PM

2:15 AM

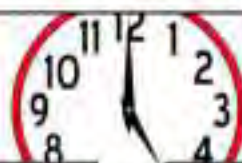
20:05

03:30

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	1	60	1	24	1
120	2		2	48	2
		180		72	
					4
300			5		5
360				144	
420				168	
	8	480			8
	9	540			9
600			10		2

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

Measuring Time – Seconds, Days, Hours, Minutes

Days (d)	Weeks (w)	Months (m)	Years (yr)
7 = 1 week 365 days = 1 year ~30 days = 1 month	52 weeks = 1 year ~ 4 weeks = 1 month	12 months = 1 year	1 year = 12 months 1 year = 52 weeks 1 year = 365 days

Part 1 Fill in the tables below

Days	Weeks
	1
14	
	4
35	20
42	
	7
	8
63	
70	

Weeks	Months
4	1
8	2
	4
20	
	6
28	
36	
	10

Months	Years
12	1
	2
36	
48	
	5
	6
84	
	9

Part 2 Convert the units of measurement below

1) 1 w _____ d

5) 28 w _____ m

9) 5 y _____ m

2) 70 d _____ w

6) 36 m _____ y

10) 4 w _____ d

3) 42 d _____ w

7) 9 y _____ m

11) 28 w _____ m

4) 12 w _____ m

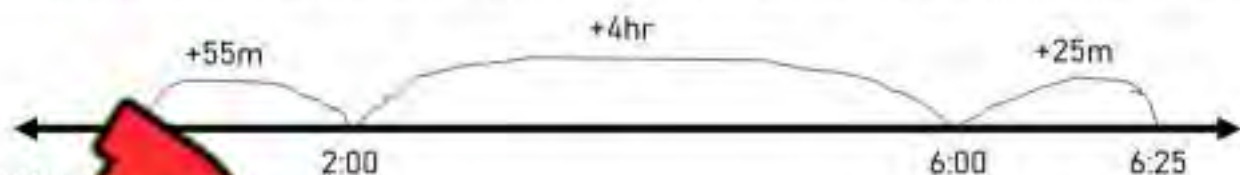
8) 84 m _____ y

12) 120 m _____ y

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 + 4hr

1h 25m + 25m

1h 50m

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



3) Becca drove from Regina to Saskatoon. She started at 7:00am 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. _____ 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. _____ has an hour and 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 to bake for 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?



Biking Adventure Elapsed Time Challenge Problems**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"/> Use a timeline | <input type="checkbox"/> Solve the problem | <input type="checkbox"/> Check your answer |

Sara went on a bike ride to a far away park today. She left her house at 9:25am.

- a) Sara had lunch after biking for 2 hours and 25 minutes. What time did she have lunch?



- b) She arrived at the park at 2:30pm. How long did it take her to get to the park?

- c) After staying at the park for an hour, she headed home. It took her the same amount of time to get home as it did to get to the park. What time did she arrive home?

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
30 minutes	_____ hour
15 minutes	_____ hour
45 minutes	_____ hour

Elapsed Time	Fraction
20 minutes	_____ hour
40 minutes	_____ hour
60 minutes	_____ hour

Part 2 Write the fraction for the elapsed time

Elapsed Time	Fraction
1 hour 30 minutes	$1\frac{1}{2}$ hours
2 hours 15 minutes	_____ hours
5 hours 45 minutes	_____ hours

Elapsed Time	Fraction
4 hours 30 minutes	_____ hours
6 hours 20 minutes	_____ hours
120 minutes	_____ hours

Part 3 Write the fraction for the elapsed time



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

Elapsed Time - Using Fractions**Questions**

Write the fraction for the elapsed time

	Word Problems	Answers
1	Library Time: Mason went to the library at 2:10 PM and left at 4:30 PM. How long did Mason spend at the library?	
2	Morning Walk: A woman started her morning walk at 7:45 AM and returned at 10:15 AM. How many hours was her walk?	
3	Basketball Practice: A basketball practice started at 3:40 PM and ended at 6:00 PM. How long did the practice last?	
4	Movie Length: Noah watched a movie that started at 1:20 PM and ended at 3:50 PM. For how many hours did he watch the movie?	
5	Cooking Session: Sophia started cooking at 5:30 PM and finished at 7:45 PM. How much time did she spend cooking?	
6	Homework Time: Olivia began her homework at 4:15 PM and finished at 6:00 PM. How long did she spend on her homework?	

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
- Separate sheet of paper 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 recording 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 1:

Start: 8:00 AM, End: 11:00 AM -
How much time has elapsed?

- A) 2.5 hours
- B) 3 hours
- C) 3.5 hours

Card 5:

Start: 7:00 AM, End: 10:30 AM -
Calculate the elapsed time.

- A) 3 hours
- B) 3.5 hours
- C) 4 hours

Start: 1:00 PM, End: 4:25 PM -
How much time has elapsed?

- A) 3 hours
- B) 3.5 hours
- C) 4 hours

Card 6:

Start: 6:00 PM, End: 8:30 PM - How
much time has elapsed?

- A) 2 hours
- B) 2.5 hours
- C) 3 hours

Card 3:

Start: 9:15 AM, End: 12:45 PM -
What is the elapsed time?

- A) 3 hours
- B) 3.5 hours
- C) 4 hours

Start: 7:00 AM, End: 1:30 PM -
What is the duration of this
period?

- A) 2 hours
- B) 2.5 hours
- C) 3 hours

Card 4:

Start: 2:30 PM, End: 5:00 PM - How
long was the duration?

- A) 2 hours
- B) 2.5 hours
- C) 3 hours

Card 8:

Start: 3:00 PM, End: 5:00 PM - How
long is the period?

- A) 1.5 hours
- B) 2 hours
- C) 2.5 hours

Task Cards

Cut out the task cards below

Card 9:

Start: 10:00 AM, End: 12:30 PM -
What is the elapsed time?

- A) 2 hours
- B) 2.5 hours
- C) 3 hours

Card 13:

Start: 9:09 AM, End: 11:54 AM -
What is the elapsed time?

- A) 2 hours 45 minutes
- B) 2 hours 55 minutes
- C) 2 hours 35 minutes

Start: 4:15 PM, End: 6:45 PM - How
much time has passed?

- A) 2 hours
- B) 2.5 hours
- C) 3 hours

Card 14:

Start: 2:50 PM, End: 4:32 PM - How
long was the duration?

- A) 1 hour 42 minutes
- B) 1 hour 52 minutes
- C) 1 hour 32 minutes

Card 11:

Start: 8:22 AM, End: 10:47 AM -
How much time has elapsed?

- A) 2 hours 25 minutes
- B) 2 hours 15 minutes
- C) 2 hours 35 minutes

Start: 7:06 AM, End: 10:06 AM -
Calculate the elapsed time.

- A) 3 hours
- B) 3 hours 51 minutes
- C) 3 hours 31 minutes

Card 12:

Start: 1:13 PM, End: 3:38 PM - How
much time has passed?

- A) 2 hours 15 minutes
- B) 2 hours 25 minutes
- C) 2 hours 35 minutes

Card 16:

Start: 5:50 PM, End: 7:20 PM - How
much time has elapsed?

- A) 1 hour 30 minutes
- B) 1 hour 40 minutes
- C) 1 hour 20 minutes

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

Card 22:

Start: 3:03 PM, End: 5:08 PM - How
long is the period?

- A) 1 hour 55 minutes
 - B) 1 hour 45 minutes
 - C) 1 hour 35 minutes
- 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: 1:29 AM, End: 3:58 AM -
What is the elapsed time?

- A) 2 hours 29 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

Name: _____

65

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

Elapsed Time – Days - Word Problems**Questions**

Read the problems and solve them below

- 1) The winter break begins on December 22nd. It is December 3rd. How many days until the winter break?



- 2) The boys basketball tournament starts on March 2nd. It ends on March 10th. How many days long is the tournament?

- 3) You are leaving on March 10th. You return on March 21st. How many days are you away on vacation?



- 4) You sent in your video game system to be fixed. You got it back on July 19th. How many days did it take to fix the video game system?

- 5) How many months long is the school year – September to June?



- 6) You will be done your babysitting course in 3 weeks and 6 days. How many days in total until you are finished?

Unit Test – Telling Time

Part 1

Read the clock and write the time below

1)



2)



3)



4)



6)



Part 2

Convert the units of measurement below

	Minutes	Hours
1)	60	
2)		2
3)	180	
4)	240	
5)		5

	Minutes	Hours
6)	150	___ hours ___ mins
7)	195	___ hours ___ mins
8)	262	___ hours ___ mins
9)	345	___ hours ___ mins
10)	400	___ hours ___ mins

Part 3 Convert the units of measurement below

1) 2 hrs _____ min

3) 300 mins _____ hrs

5) 4 d _____ hrs

2) 360 sec _____ min

4) 48hrs _____ d

6) 240 min _____ hrs

Part 4 Draw the hour and minute hands on the clocks below

1)



1:17

2)



5:39

3)



3:28

4)



11

Part 5 Convert the time by filling in the table

	24-Hour Time	12-Hour Time
1)	13:00	
2)	15:30	
3)	5:10	
4)		3:00pm
5)		9:25pm

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 2:15pm 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?

Name: _____

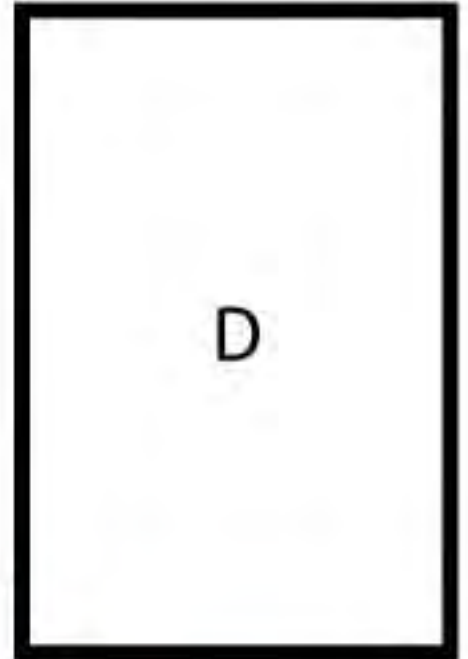
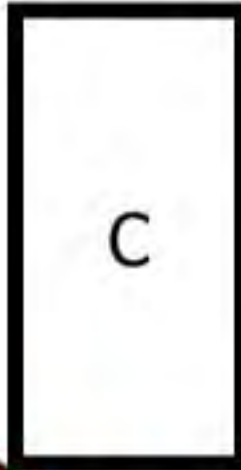
73

Curriculum Connection
554 2

Area

Questions

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



Shape	# of Times
F	
G	
H	



Name: _____

75

Area

Questions

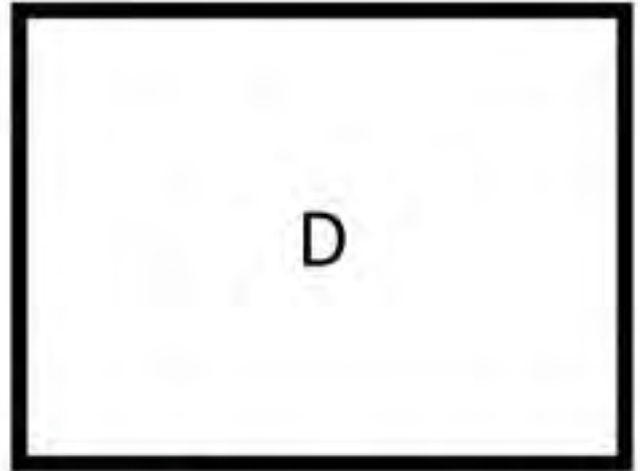
Cut A out and find out how many times it fits into the other shapes



B



C



D



E



F

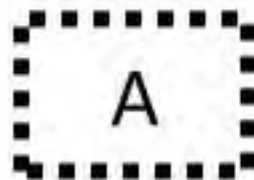


G



H

Shape	# of Times
B	
C	
G	
H	



A

Estimating Area Using Non – Standard Units**Questions**

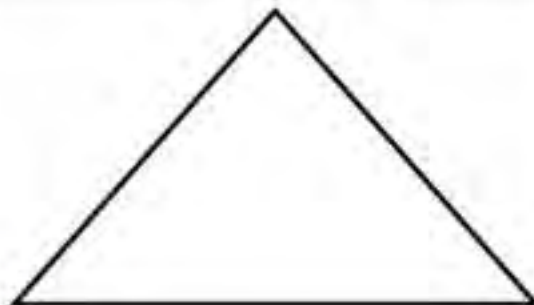
Use a shape from your classroom to estimate the area. How many times does your shape fit?

1)



Area = _____ units

2)



Area = _____

3)

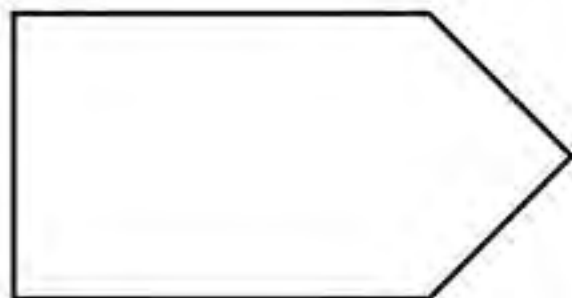


Area = _____



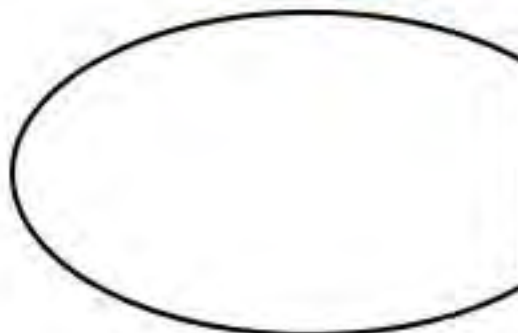
Area = _____

5)



Area = _____

6)

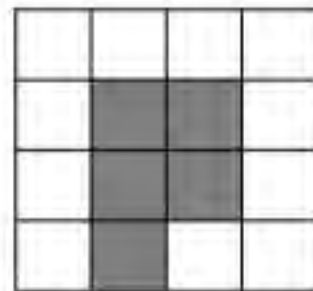


Area = _____

Introduction to Area

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

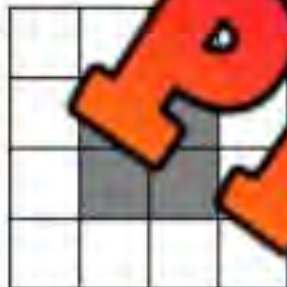
Example - The area of the shape is 5 square units.



Questions

What is the area of the shape in square units?

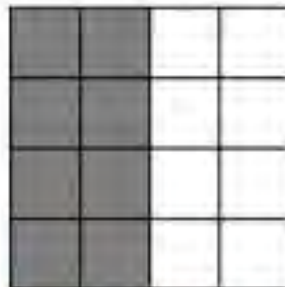
1)


 square units

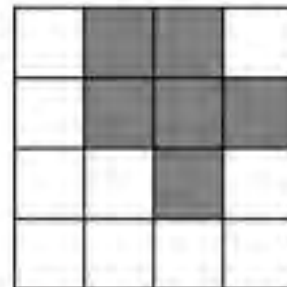
2)


 square units

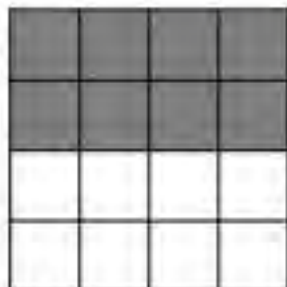
3)


 square units

4)


 square units

5)


 square units

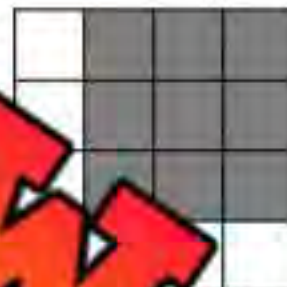
6)


 square units

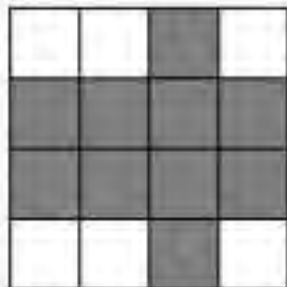
7)


 square units

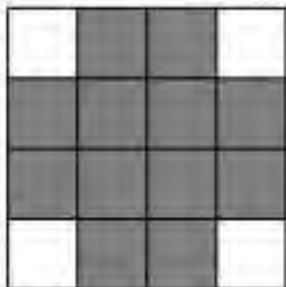
8)


 square units

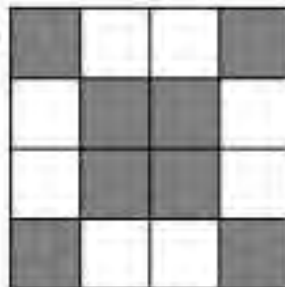
9)


 square units

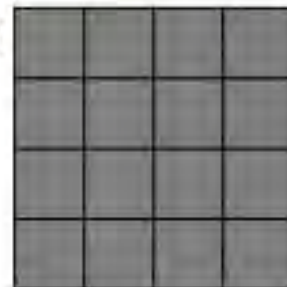
10)


 square units

11)


 square units

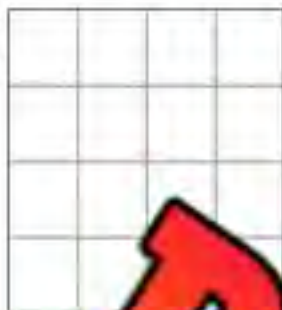
12)


 square units

Introduction to Area**Questions**

Shade in the area

1)



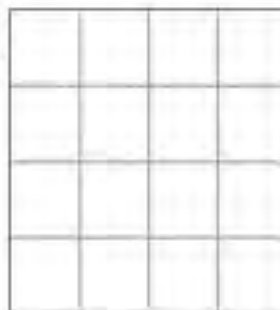
2)



3)



4)



5

square units

square units

11 square units

10 square units

5)



7)



8)



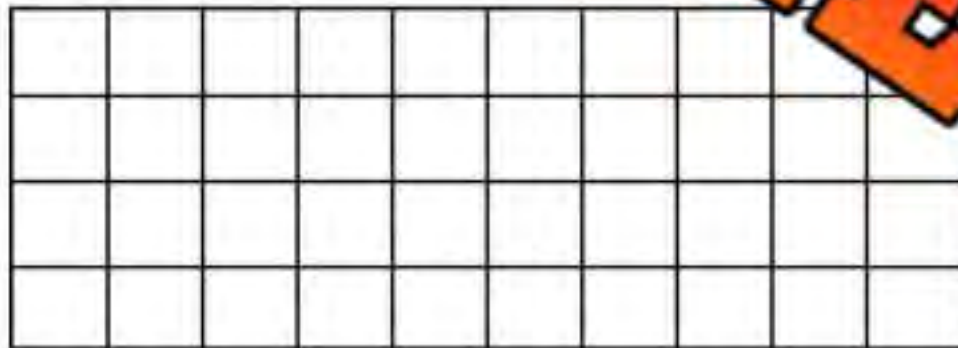
16 square units

13 square units

square units

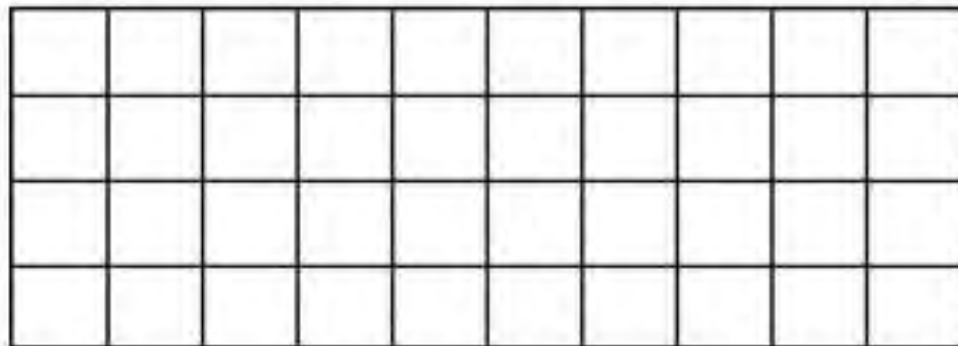
15 square units

9)



27 square units

10)



33 square units

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)

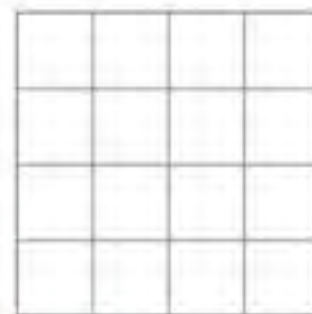


___ square units

2)

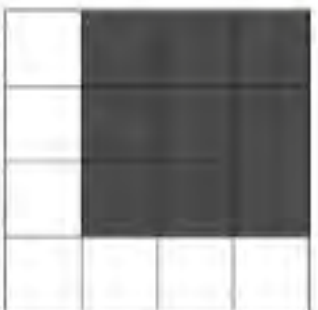


___ square units



___ square units

3)



___ square units



___ square units

4)



___ square units

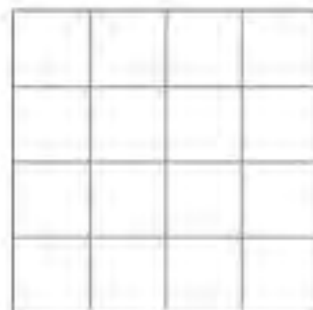


___ square units

5)



___ square units

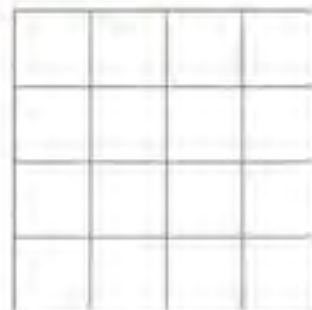


___ square units

6)



___ square units

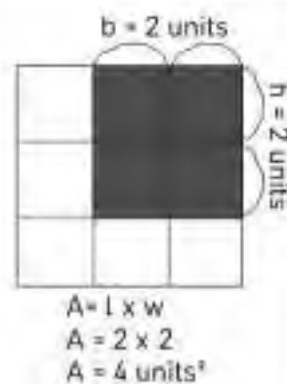
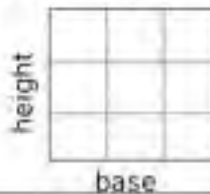


___ square units

Area – Units Squared

When we calculate the area of a shape, we can use the following formula

$$A = \text{base (b)} \times \text{height (h)}$$



Question Find the area of the shapes below

1)



2)

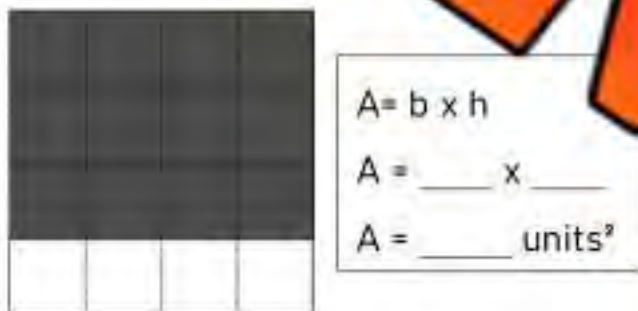


$$A = b \times h$$

$$A = \underline{\quad} \times \underline{\quad}$$

$$A = \underline{\quad} \text{ units}^2$$

3)

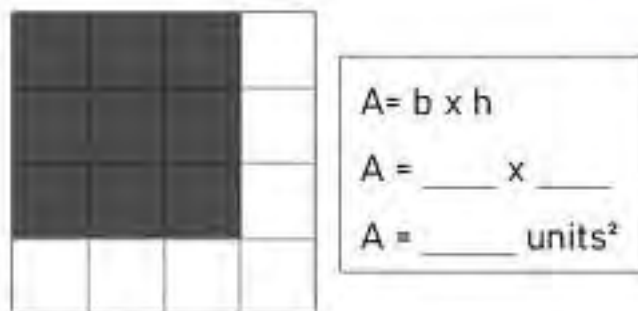


$$A = b \times h$$

$$A = \underline{\quad} \times \underline{\quad}$$

$$A = \underline{\quad} \text{ units}^2$$

5)



6)



$$A = b \times h$$

$$A = \underline{\quad} \times \underline{\quad}$$

$$A = \underline{\quad} \text{ units}^2$$

7)



$$A = b \times h$$

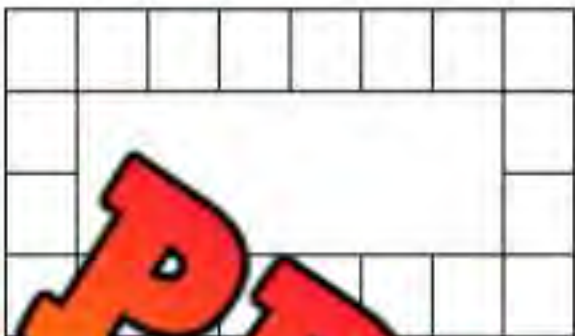
$$A = \underline{\quad} \times \underline{\quad}$$

$$A = \underline{\quad} \text{ units}^2$$

Calculating Area Using CM**Questions**

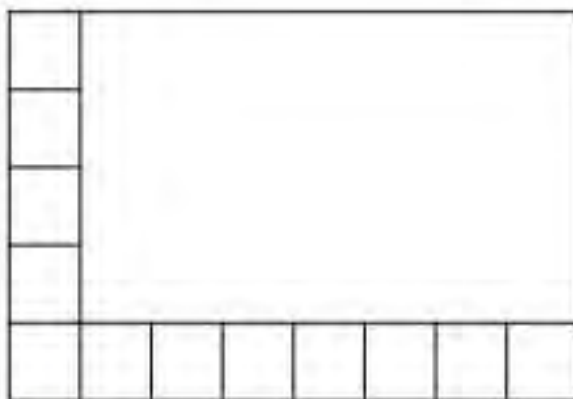
Predict the area of rectangles below

1)



Area = _____

2)



Area = _____

3)



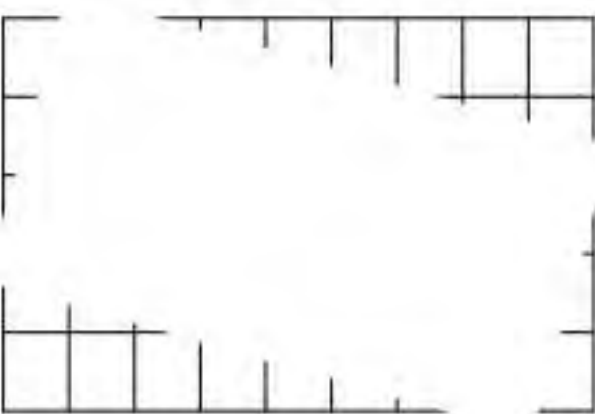
Area = _____

4)



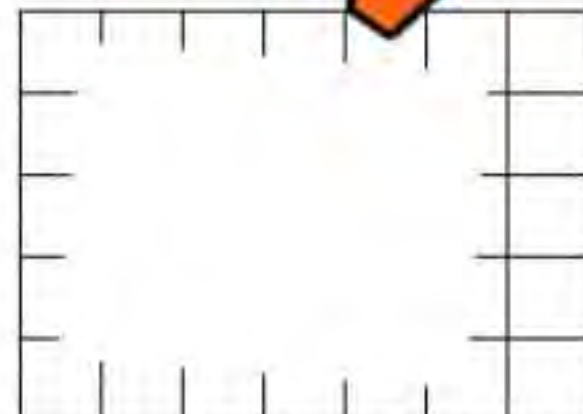
Area = _____

5)



Area = _____

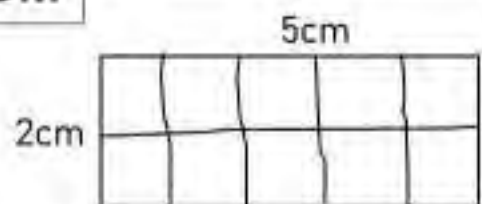
6)



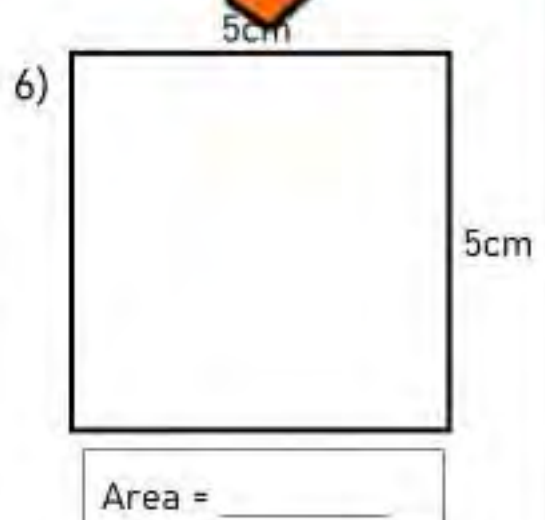
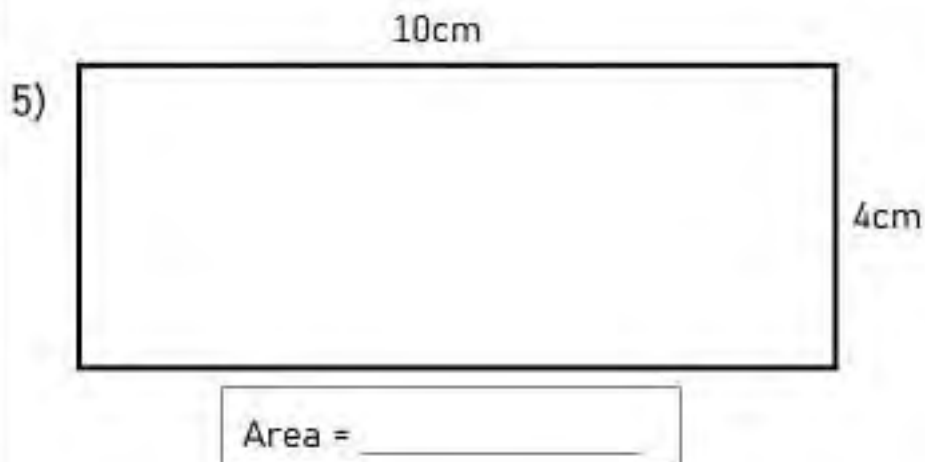
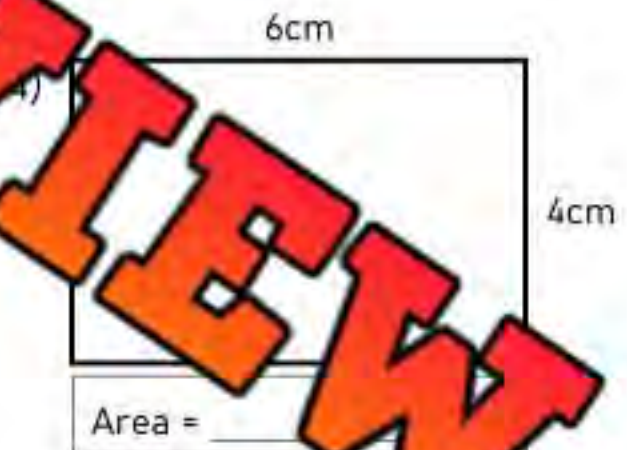
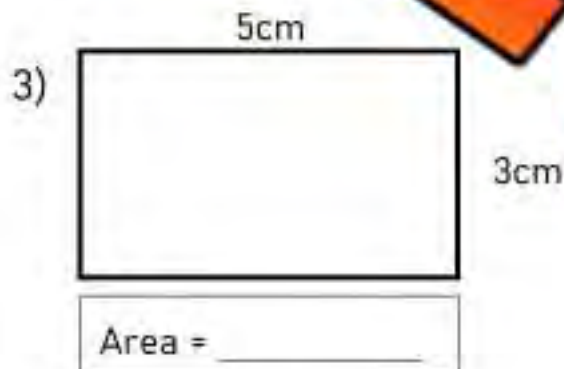
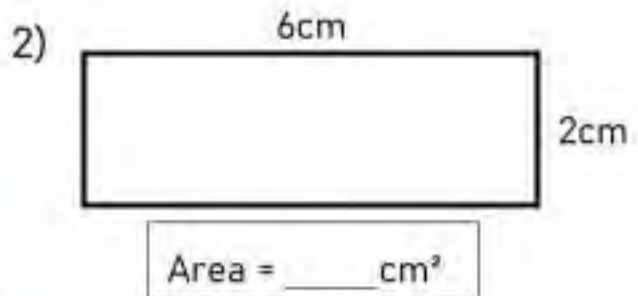
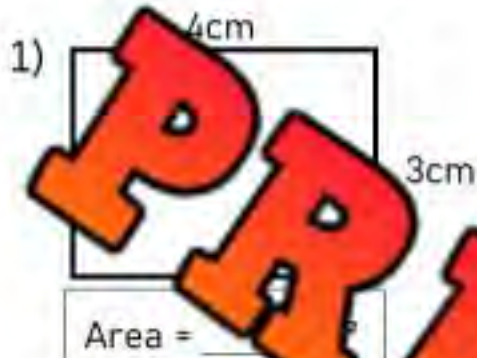
Area = _____

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



Area – CM Squared

Questions

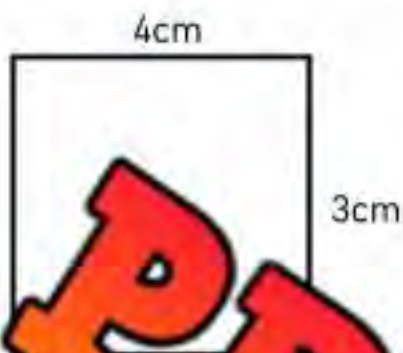
Solve using the formula: $A = b \times h$

height



base

1)

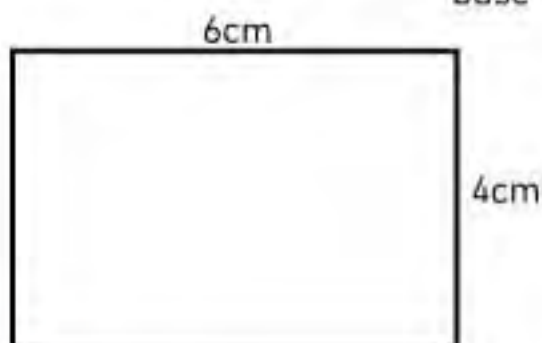


$A = b \times h$

$A = \underline{\quad} \times \underline{\quad}$

$A = \underline{\quad} \text{ cm}^2$

2)

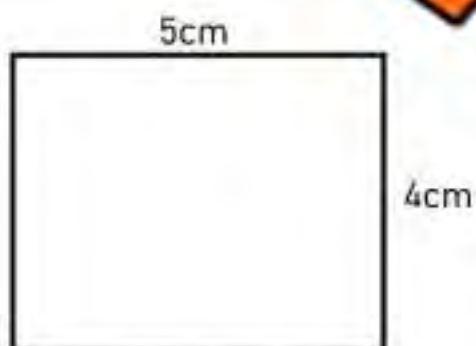


$A = b \times h$

$A = \underline{\quad} \times \underline{\quad}$

$A = \underline{\quad} \text{ cm}^2$

3)

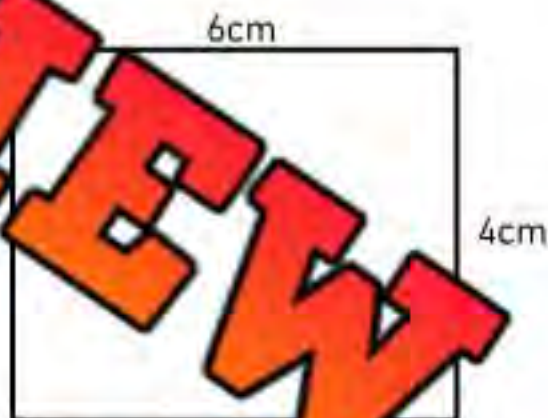


$A = b \times h$

$A = \underline{\quad} \times \underline{\quad}$

$A = \underline{\quad}$

4)

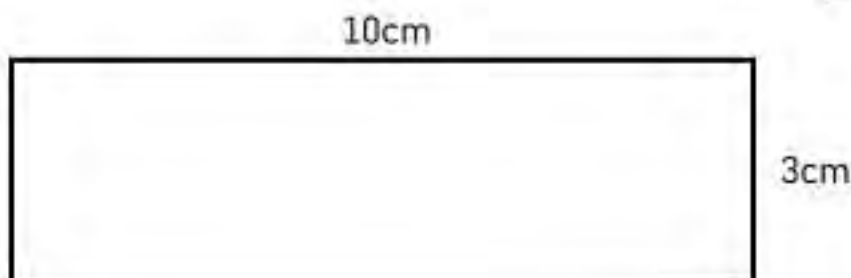


$A = b \times h$

$A = \underline{\quad} \times \underline{\quad}$

$A = \underline{\quad}$

5)

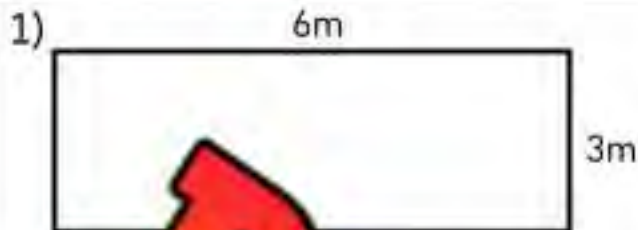
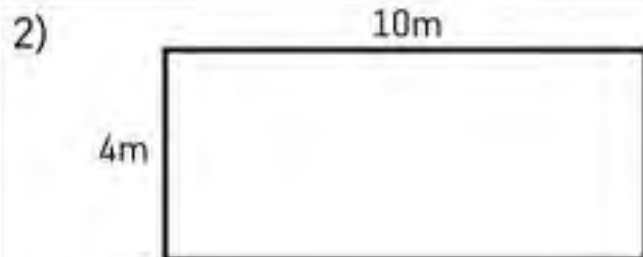


$A = b \times h$

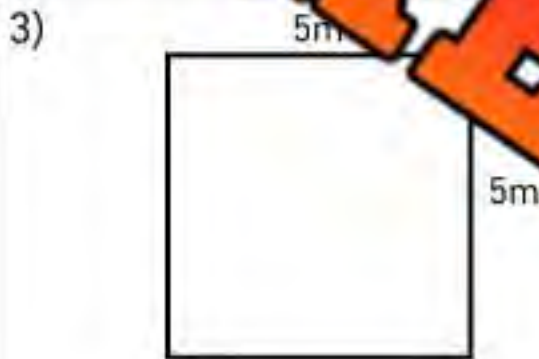
$A = \underline{\quad} \times \underline{\quad}$

$A = \underline{\quad}$

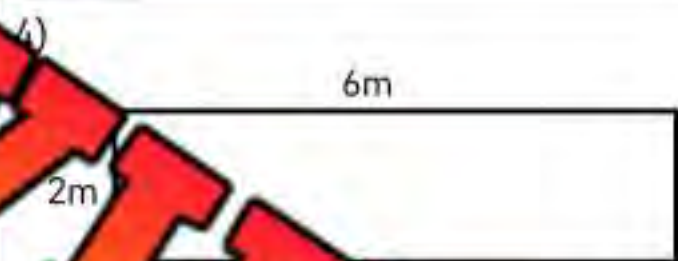
Finding the Area of Rectangles

QuestionsFind the area ($A = b \times h$)Area = _____ m^2 

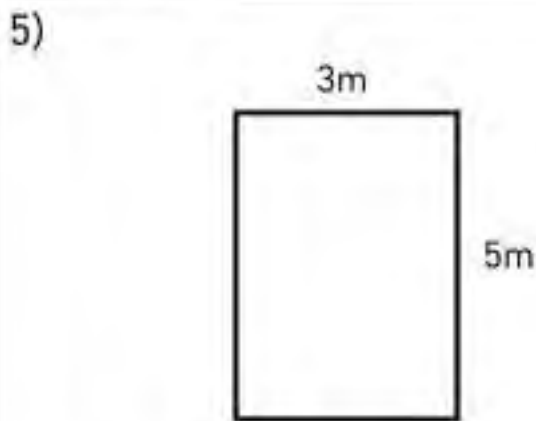
Area = _____



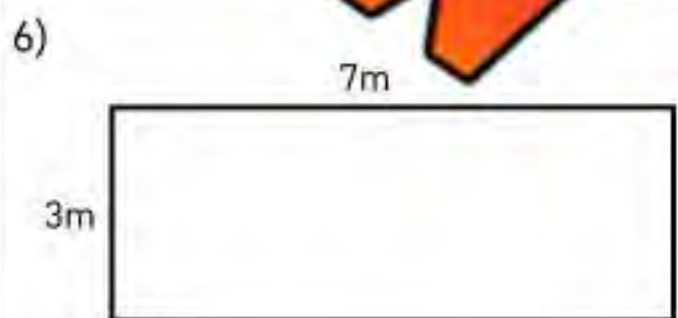
Area = _____



Area = _____



Area = _____



Area = _____

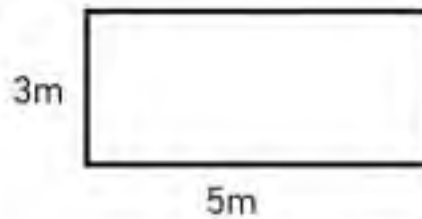
Finding the Area of Rectangles**Questions**Find the area ($A = b \times h$)

1)



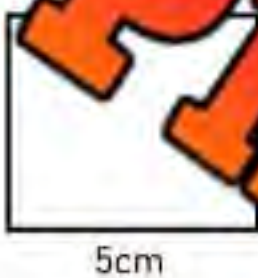
Area = _____

2)



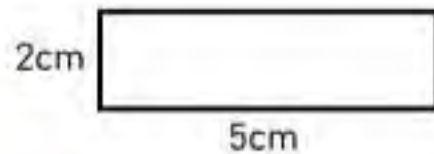
Area = _____

3)



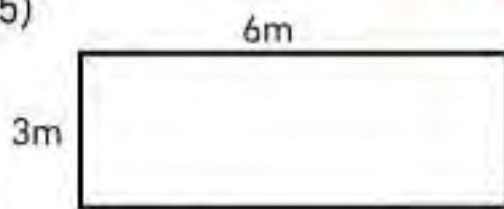
Area = _____

4)



Area = _____

5)



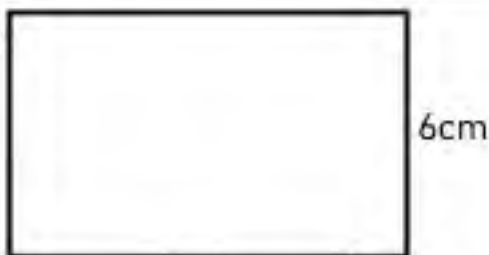
Area = _____

8)



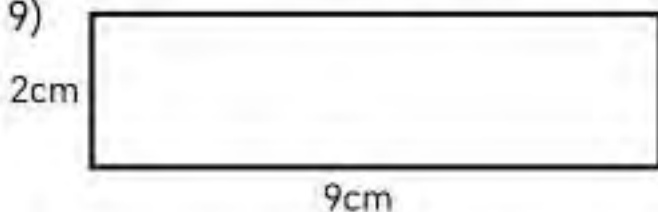
Area = _____

7)



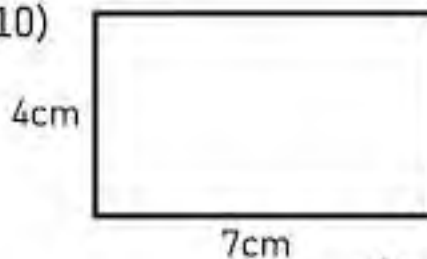
Area = _____

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?



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 install a rectangular yard that measures 12 metres by 8 metres. A roll of sod covers an area of 4 square metres. How many rolls 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> 	

Exit Cards

Cut Out

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

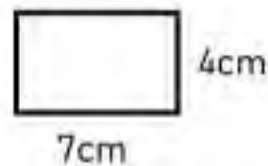
Name: _____

1) Calculate the area. _____

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

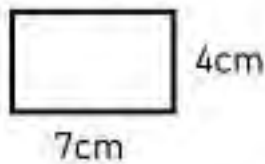
Name: _____

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?

Referents For Square Centimeter

A **referent** is something that represents something else. When we measure, we don't always have measuring tools. Without tools, we can use a referent to estimate area. A good referent for a centimetre squared could be your pinky fingernail.

Questions

Find a referent for a centimeter squared



1) What is the referent you chose?

2) Draw the referent.

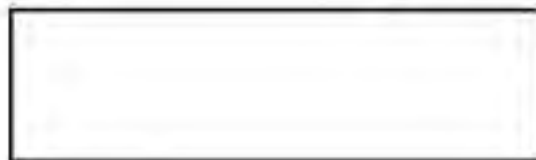
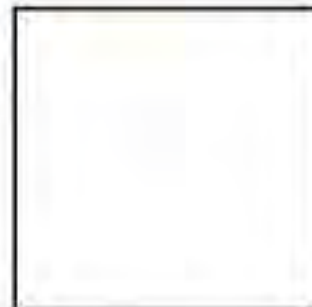
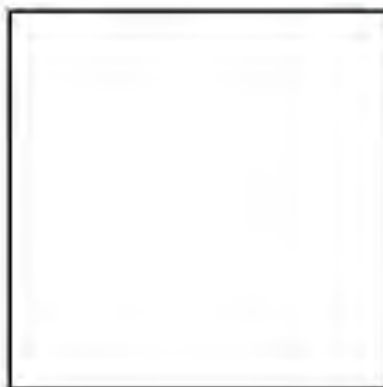
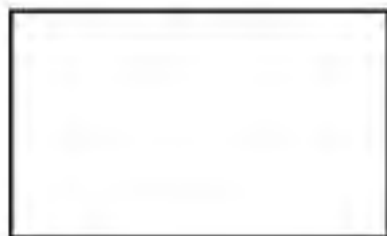
3) Measure the lengths of each side of your referent. What is the base and height?

Base

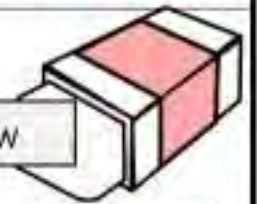
Height

4) Is this a good referent? Explain why or why not.

5) Use your pinky fingernail as a referent for a cm^2 . How many fingernails will fit in the rectangles below? Write your answer inside the rectangles.



Referents For Square Centimeter

**Questions**

Use your referent to estimate the area of the spaces below

Objects/Spaces	Estimated Area
1) Your desk/tabletop	
2) The	
3) A book in yo	
4) The door to the classroom	
5) A whiteboard/chalkboard in your room	
6) A window in your room	
7) The front of a pencil case	
8) A computer screen	
9) The bottom of your chair (part you sit on)	
10) An eraser	

PREVIEW

Choosing An Appropriate Unit



Directions

Which unit would you use to describe the areas below

#	Areas	Unit (cm ² m ²)
1)	The area of a classroom	
2)	The area of a tennis court	
3)	The area of a sheet of paper	
4)	The area of a mat	
5)	The area of a handshake	
6)	The area of a computer screen	
7)	The area of a dinner plate	
8)	The area of an amusement park	
9)	The area of phone screen	
10)	The area of your gym at school	

Directions

Josh told a friend the area of things. Did he use an appropriate unit?

#	Area	Yes	No	Better Unit
1)	The area of my tablet is 0.98 m ²	Yes	No	
2)	The area of my pencil case is 0.052 m ²	Yes	No	
3)	The area of my driveway is 75 000 cm ²	Yes	No	
4)	The area of my closet is 2.5 m ²	Yes	No	
5)	The area of my pool is 300 000 cm ²	Yes	No	

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



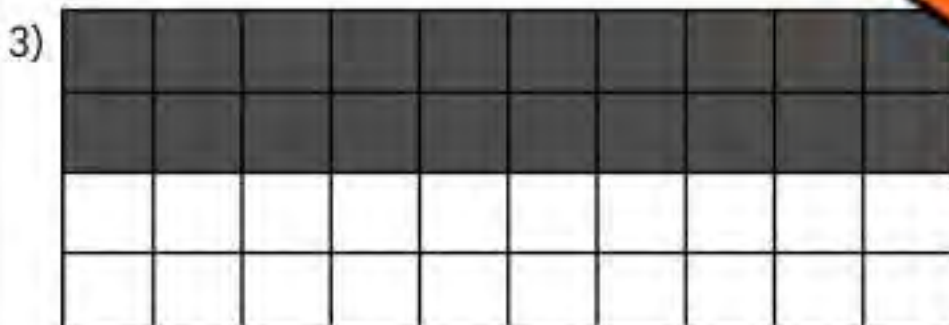
$$A = b \times h$$

$$18 = _ \times 3$$

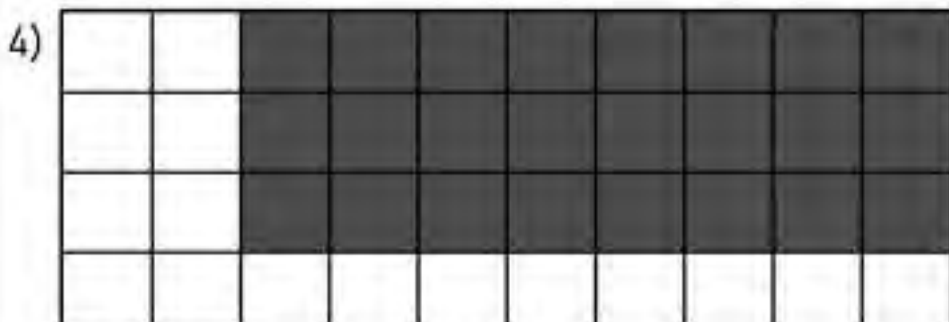


$$A = b \times h$$

$$32 = 8 \times _$$



$$20 = _ \times 2$$



$$A = b \times h$$

$$24 = 8 \times _$$

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)

$A = 32$

Base = _____

Height = _____

8cm

4)

10m

$A = 30\text{m}^2$

Base = _____

Height = _____

Area = _____

5)

3m

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

Base = _____

Height = _____

Area = _____

6)

4m

$A = 20$

Base = _____

Height = _____

Area = _____

7)

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

Base = _____

Height = _____

Area = _____

8cm

8)

1m

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

Base = _____

Height = _____

Area = _____

9)

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

Base = _____

Height = _____

Area = _____

10cm

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 8m . 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?



Math Activity: Rectangle Rally

Objective

What are we learning about?

To help students understand and calculate the area of a rectangle through interactive and hands-on learning activities.

Materials

What you will need for the activity.

- Grid paper
- Rulers
- Colored pencils
- Scissors
- Rectangular objects from the classroom (e.g., books, tablets, small boxes)



Instructions

How you will complete the activity.

1. Begin the activity by explaining the formula for the area of a rectangle ($\text{Area} = \text{length} \times \text{width}$).
2. Hand out sheets of grid paper and rulers to each student.
3. Instruct students to draw rectangles of various sizes on the grid using the rulers. Make sure each student draws at least three different rectangles.
4. Have students write down the dimensions (length and width) of each rectangle next to their drawings.
5. Ask the students to calculate the area of each rectangle by counting the grid squares inside each rectangle and using the formula.
6. Once the grid calculations are done, distribute the rectangular objects around the classroom.
7. Allow students to measure the length and width of each object with their rulers, calculate the area, and record their findings.
8. Have students compare the areas they calculated for their drawings with the real objects' areas.
9. Discuss any differences or surprises in the measurements and calculations.

Reflection

Answer the questions below.

1) What did you find interesting about measuring the area of rectangles?

2) How did grid paper help you understand the concept of area?

3) What challenges did you find when calculating the areas?

4) How can knowing how to calculate the area of a rectangle help in real life?

5) What would you like to try next to extend what you've learned about area?

PREVIEW

Calculating Area - House

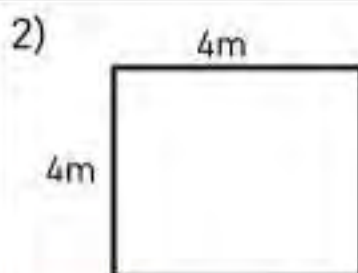
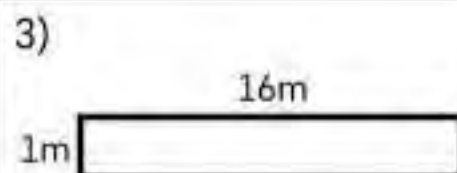
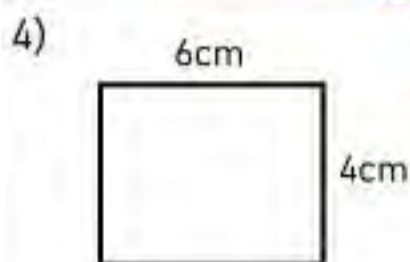
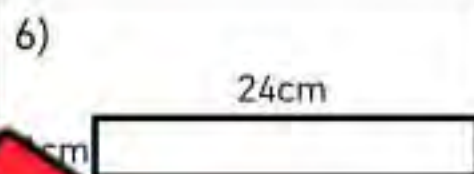
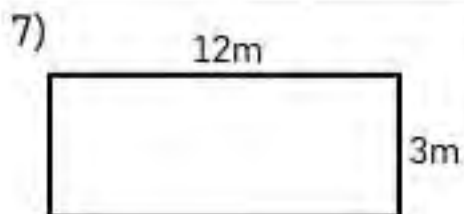
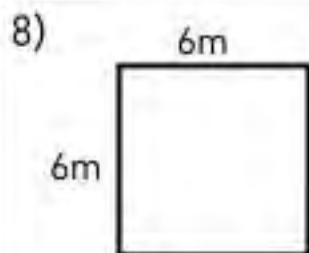
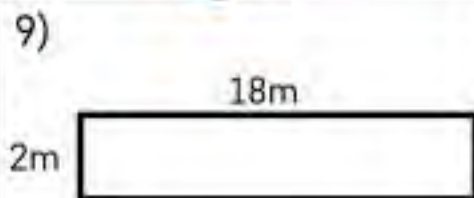


Questions

Calculate the area of the rooms in the house.


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

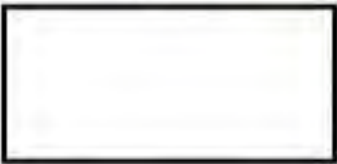
Room	Area
Back Deck	
Bathroom 1	
Bathroom 2	
Bathroom 3	
Bedroom 1	
Bedroom 2	
Bedroom 3	


Same Area – Different Rectangle**Think** Is it possible for a rectangle to have the same area with different dimensions?Area: _____ m²Area: _____ m²Area: _____ m²Area: _____ cm²Area: _____ cm²Area: _____ cm²Area: _____ m²Area: _____ m²Area: _____ m²

Same Area – Different Rectangle**Draw**

Draw two other rectangles with the same area with different dimensions

<p>3m</p>  <p>4m</p> <p>Area: _____ m²</p>	1)	2)
--	----	----

<p>8cm</p>  <p>3cm</p> <p>Area: _____ cm²</p>	1)	2)
---	----	----

<p>5m</p>  <p>4m</p> <p>Area: _____ m²</p>	1)	2)
--	----	----

Area Word Problems



Questions

Answer the questions below

	Word Problems	Answers
1	A garden bed is 8 metres in length and 2 metres in width. Tom is planning to build a new garden bed that is 4 metres in length. What should the width of his new garden bed be so that it has the same area as the old one?	
2	John has two rectangular rugs. One rug is 4 metres long and 3 metres wide. He has another rug that is 6 metres long. How wide is the second rug if it has the same area as the first?	
3	A photograph has an area of 200 square centimetres. It is 4 centimetres wide. How long is it? Another photograph is twice as long, what must its width be to have the same area?	
4	A rectangular dining room is 5 metres long and 4 metres wide. A new apartment has a dining space that is 10 metres long. What would the width of this space need to be to have the same area as the rectangular dining room?	
5	A piece of fabric is 10 metres long and 6 metres wide. A tailor wants to cut it into a different shape that is 15 metres long. How wide will the new piece of fabric be if it has the same area?	

Indigenous Art – Finding Area

Questions

Measure the side lengths and calculate the area of the Indigenous paintings



Calculate
Show Your Work

Answer



Calculate
Show Your Work

Answer

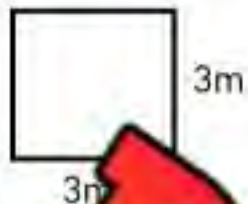


Answer

Unit Test – Area**Part 1**

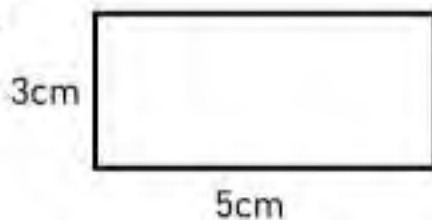
Find the area

1)



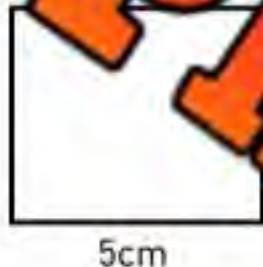
Area = _____

2)



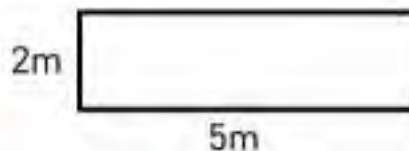
Area = _____

3)



Area = _____

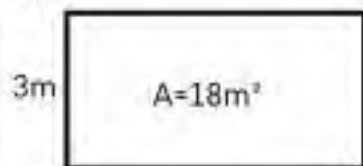
4)



Area = _____

Part 2Find the area ($A = b \times h$)

1)



Base = _____

Height = _____

Area = _____

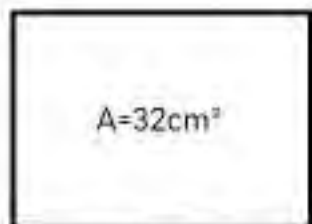
2)



Height = _____

Area = _____

3)

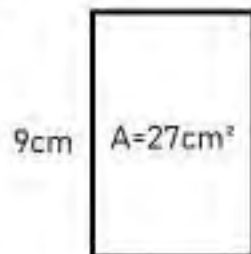


Base = _____

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 72m^2 and a height of the bus in 4m. What is the base?

Part 4 Answer the questions about centimeter squares and referents

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


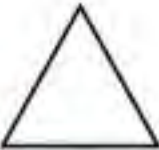
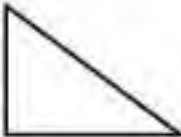
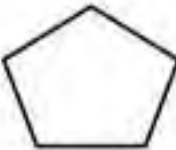






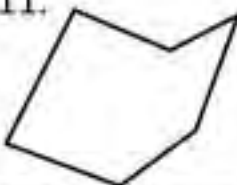




2) Using the referent above, how many centimetres squared is this paper?

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?

Sides of a Shape**Part 1**

How many sides does the shape have?

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

Part 2

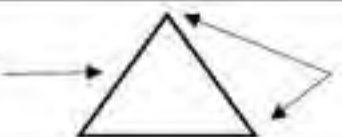
Draw a shape with the correct number of sides

1)	2)	3)	4)	5)
4	3	6	8	10

Sides and Vertices

Reminder:

Side



Vertices

Part 1

How many sides and vertices does the shape have?

1.	2.	3.	4.	5.
_____ sides	_____ sides	_____ sides	_____ sides	_____ sides
_____ vertices	_____ vertices	_____ vertices	_____ vertices	_____ vertices
6.	7.	8.	10.	
_____ sides	_____ sides	_____ sides	_____ sides	
_____ vertices	_____ vertices	_____ vertices	_____ vertices	

Part 2

Draw a shape with the correct number of vertices and sides

1.	2.	3.	4.	5.
3 sides	4 sides	5 sides	6 sides	7 sides
3 vertices	4 vertices	5 vertices	6 vertices	7 vertices

Exit Cards

Cut Out

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

Name: _____

1) Fill in the blanks about the shape.

Sides: _____

Vertices: _____

2) Draw a shape with 6 sides and 6 vertices.



Name: _____

1) Fill in the blanks about the shape.

Sides: _____

Vertices: _____

2) Draw a shape with 6 sides and 6 vertices.



Name: _____

1) Fill in the blanks about the shape.

Sides: _____

Vertices: _____

2) Draw a shape with 6 sides and 6 vertices.



Name: _____

1) Fill in the blanks about the shape.

Sides: _____

Vertices: _____

2) Draw a shape with 6 sides and 6 vertices.



Sides and Vertices Word Problems



Questions

Answer the questions below

	Word Problems	Answers
1	A shape has 3 sides and 3 vertices. What is it?	
2	Sam has a figure with 4 sides of equal length. How many vertices does it have?	
3	A shape has 4 vertices and 4 sides. What shape is it?	
4	A classroom door is shaped like a rectangle. How many sides and vertices does it have?	
5	A piece of fabric is 10 metres long and 6 metres wide. A tailor wants to cut it into a different shape that is 15 metres long and 4 metres wide. Will the new piece of fabric be if it has the same area?	
6	An octagon is featured on a sign. Count the sides and vertices.	
7	A hexagon-shaped frame holds a picture. How many sides and vertices does this shape have?	
8	If a shape has 6 sides, and all sides are equal, what is the number of vertices?	

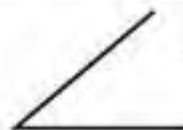
Naming Angles



= larger than
a right angle



= right angle



= smaller than
a right angle

Questions

Label the angles in comparison to a right angle – larger, smaller, right angle

1)

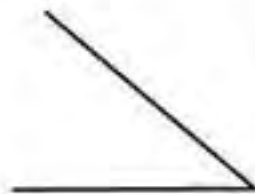


2)



3)

4)



5)



6)



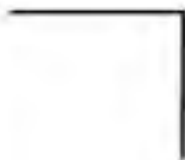
7)



8)



9)



10)



11)

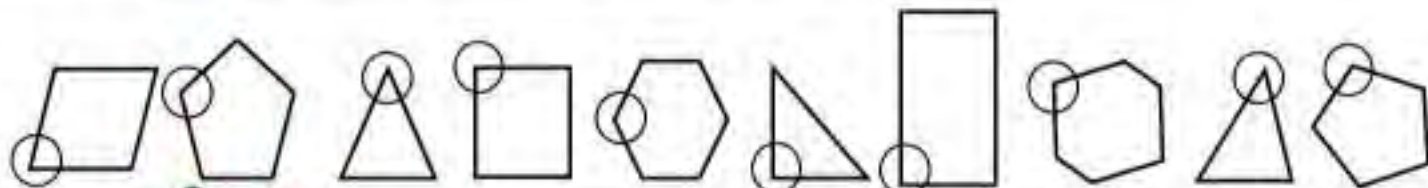


12)



Sorting Angles

Part 1 Sort the angles into the categories below



A

C

D

E

F

G

H

I

J

Angles	Right Angle	Larger than a right angle	Smaller than a right angle
Letters			

Part 2 Sort the angles into the categories below



A

B

C

D

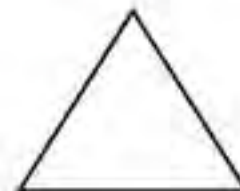
G

H

Angles	Right Angle	Larger than a right angle	Smaller than a right angle
Letters			

Part 3 Circle the angles below

Drawings



Angles

Right Angle

Larger than a right angle

Smaller than a right angle

Math Activity: Right Angle Architects

Objective

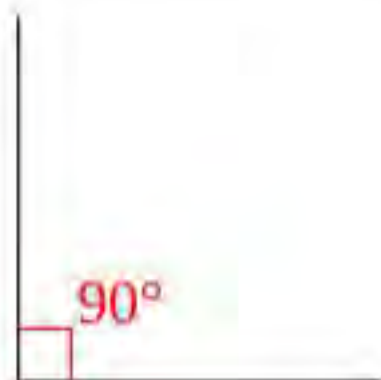
What are we learning about?

To engage students in identifying right angles through the construction of paper structures, enhancing their understanding of right angles in a practical and creative context.

Materials

What you will need for the activity.

- Construction paper or cardstock
- Scissors
- Glue or tape
- Coloured markers or crayons



Instructions

How you will complete the activity

1. Begin by explaining what a right angle is, using examples like the corners of a book or a door frame to illustrate.
2. Distribute construction paper or cardstock, scissors, and glue to each student.
3. Challenge students to create a structure or sculpture using as many right angles as possible. They can build houses, furniture, or abstract designs.
4. Encourage students to use their rulers to help fold and cut straight lines, which can help form right angles more accurately.
5. As students work, circulate and discuss their projects, asking them to point out where they have used right angles.
6. Once the structures are complete, allow students to use markers or crayons to decorate their creations, highlighting the corners and edges where right angles are present.
7. Arrange all the structures on a table or along a classroom shelf and conduct a gallery walk where students explain their structures and the right angles within them to the class.
8. Discuss how these angles contribute to the stability and aesthetics of their designs.

Example

Check out the example below



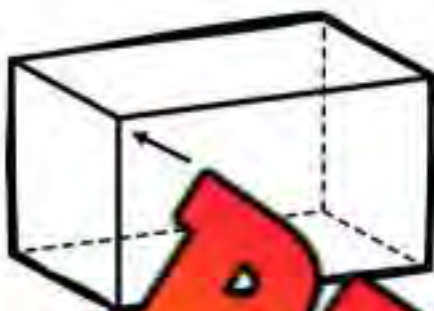
PREVIEW



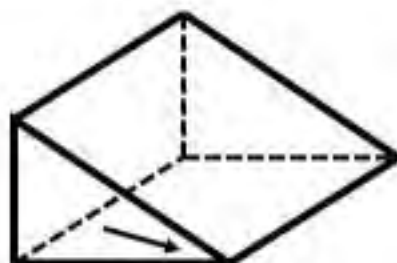
Angles in Right Prisms

Questions

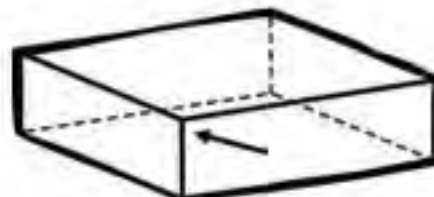
Circle the indicated angle on each of the prisms below



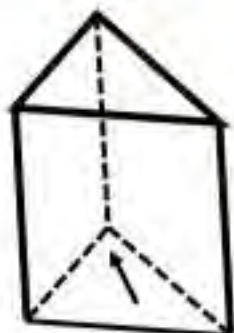
Right Smaller



Right Smaller Larger



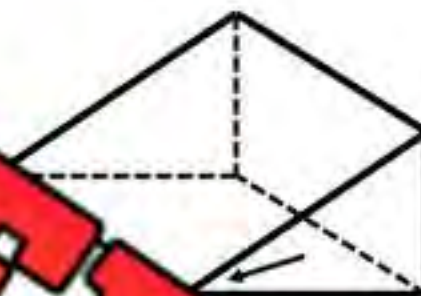
Right Smaller Larger



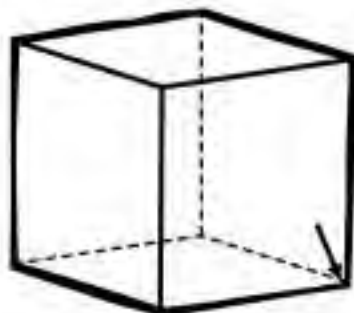
Right Smaller Larger



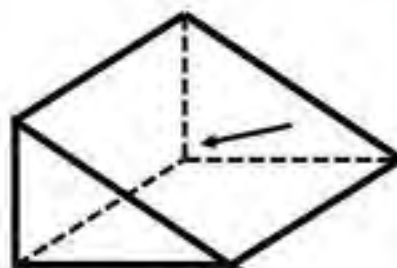
Right Smaller Larger



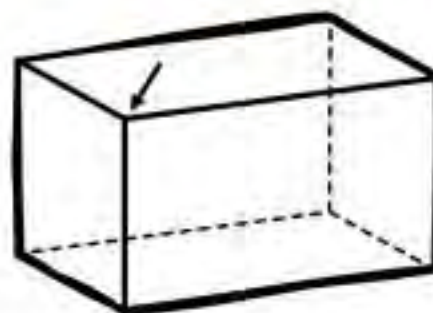
Right Smaller Larger



Right Smaller Larger



Right Smaller Larger



Right Smaller Larger

PREVIEW

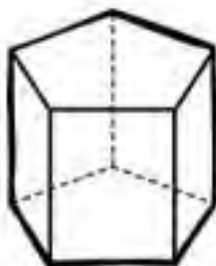
Prisms or Pyramids

Questions

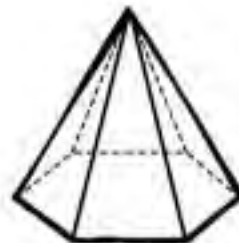
Is the shape a prism or pyramid?



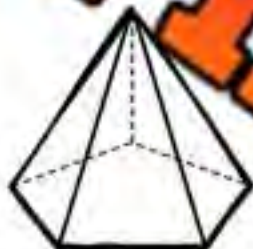
Prism Pyramid



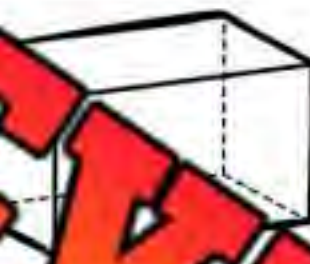
Prism Pyramid



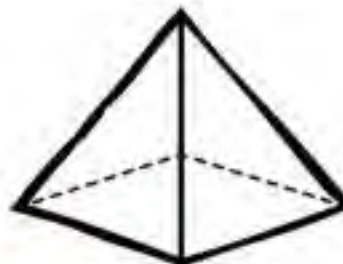
Prism Pyramid



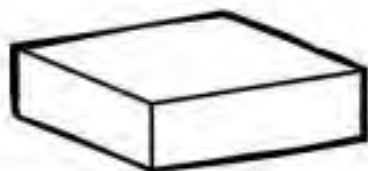
Prism Pyramid



Prism Pyramid



Prism Pyramid



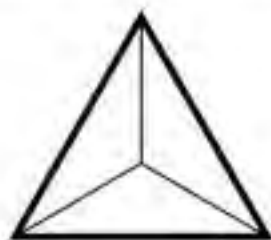
Prism Pyramid



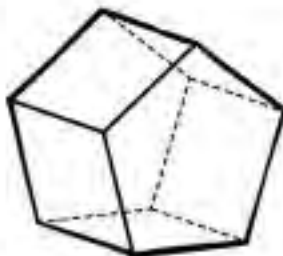
Prism Pyramid



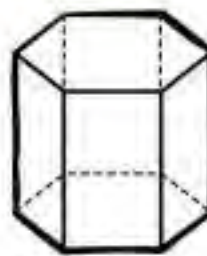
Prism Pyramid



Prism Pyramid



Prism Pyramid



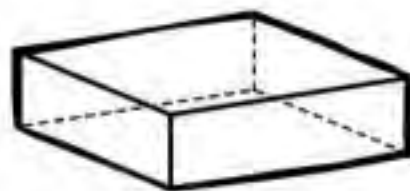
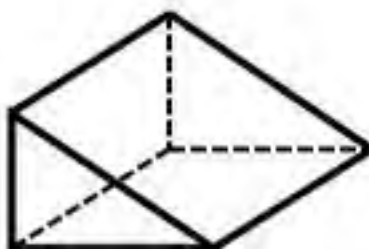
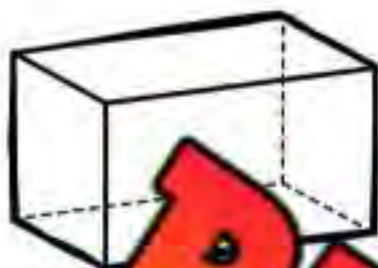
Prism Pyramid

PREVIEW

Prisms – Faces, Edges, Vertices

Questions

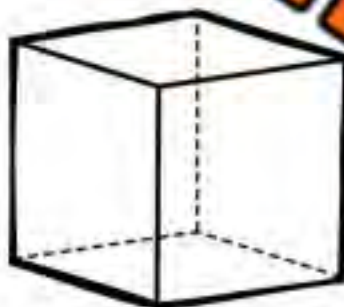
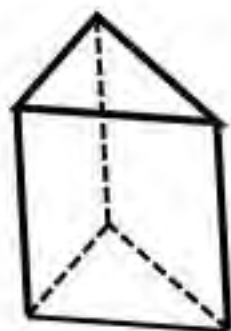
Fill in the tables below on the rectangular and right triangular prisms



Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

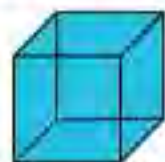
Faces	
Edges	
Vertices	
Name	



Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

3D Objects Word Problems**Questions**

Answer the questions below

	Word Problems	Answers
1	Mia has a rectangular prism with 6 faces. If each face has 4 edges, how many edges does the prism have in total?	
2	_____ has a cube with 8 vertices. How many edges does the cube have?	
3	Emily's pyramid has 4 faces. If each face has 3 edges, how many edges does the pyramid have?	
4	Liam's triangular prism has 5 faces. How many edges does it have?	
5	Olivia's sphere has 0 edges and 0 vertices. How many faces does it have?	
6	Jake's cone has 1 circular face and 1 curved edge. How many vertices does it have?	

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: _____

Name: _____

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Curriculum Connection
SS4.3

Net – Rectangular Prism

PREVIEW

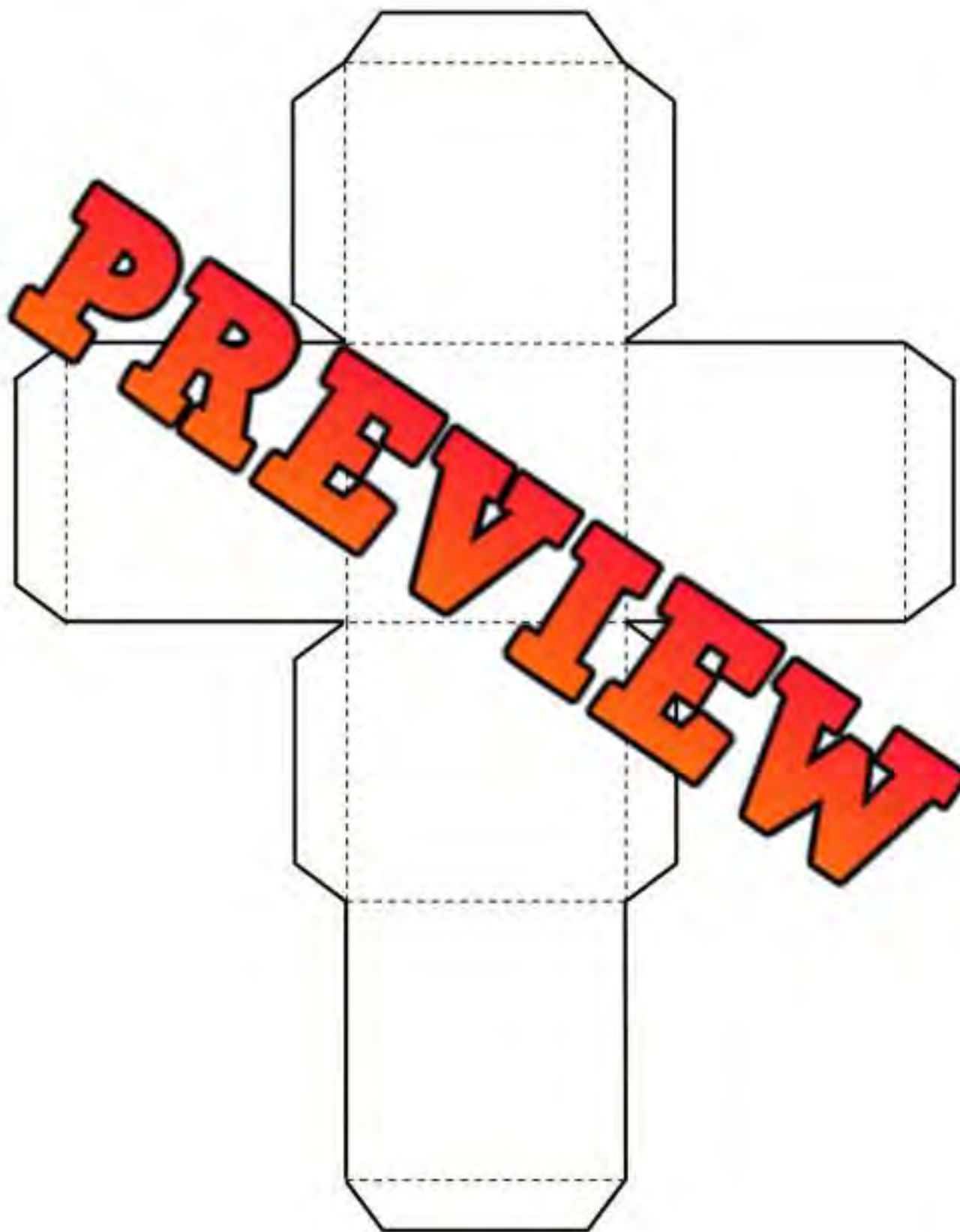


Name: _____

128

Curriculum Connection
SS4.3

Net – Cube



Name: _____

129

Curriculum Connection
554.3

Net – Rectangular Prism

PREVIEW

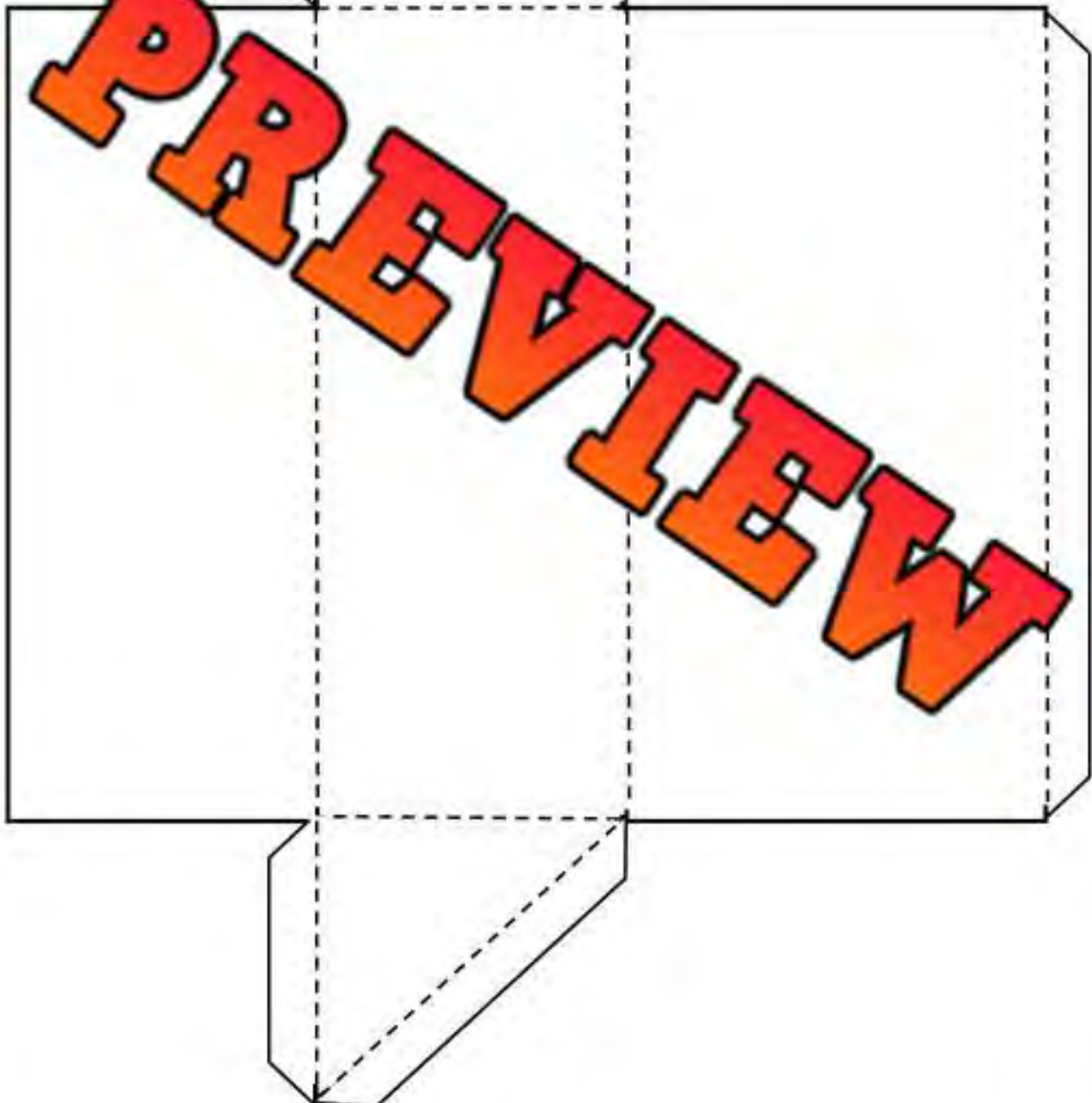
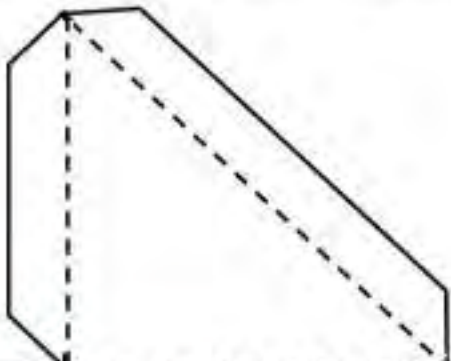


Name: _____

132

Curriculum Connection
SS4.3

Net – Triangular Prism



Math Activity: 3D Shape Builders**Objective**

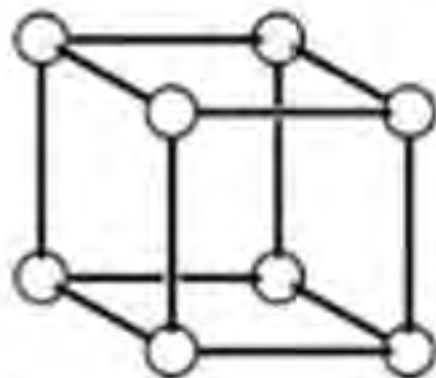
What are we learning about?

To help students recognize and understand the properties of three-dimensional shapes, specifically focusing on cubes, rectangular prisms, and triangular prisms.

Materials

What you will need for the activity.

- Playdough or marshmallows
- Toothpicks
- Construction paper
- Scissors
- Glue

**Instructions**

How you will complete the activity

1. Start the lesson by explaining what 3D shapes are and discussing the specific shapes you'll focus on: cubes, rectangular prisms, and triangular prisms.
2. Show examples of each shape, either as physical models or drawings, and discuss their properties such as vertices, edges, and faces.
3. Distribute playdough or clay and toothpicks to each student.
4. Instruct students to use the playdough or clay to make vertices and toothpicks to connect them as edges to form each of the three shapes.
5. After constructing the shapes with playdough and toothpicks, provide students with construction paper, scissors, and glue to make paper models of each shape.
6. Have students measure and cut the construction paper into the correct number of faces for each shape and then glue them together to form the 3D shapes.
7. Once all models are completed, students should label each part of their shapes (vertices, edges, and faces) on the paper models.
8. Display all shapes on a class table and discuss how the shapes are used in real-life contexts.

Reflection

Answer the questions below.

1) Which shape was the easiest to construct and why?

2) What challenges did you face while making the 3D shapes and how did you overcome them?

3) How are the shapes similar and how are they different?

4) Can you find any objects in the classroom that match any of the shapes you built?

5) Why do you think it is important to learn about 3D shapes?

PREVIEW

Triangular and Rectangular Prisms in our Environment**Questions**

Circle whether the objects are rectangular or right-triangular prisms



Rectangular Prism

Triangular Prism



Rectangular Prism

Triangular Prism



Rectangular Prism

Triangular Prism



Rectangular Prism

Triangular Prism



Rectangular Prism

Triangular Prism



Rectangular Prism

Triangular Prism



Rectangular Prism

Triangular Prism



Rectangular Prism

Triangular Prism



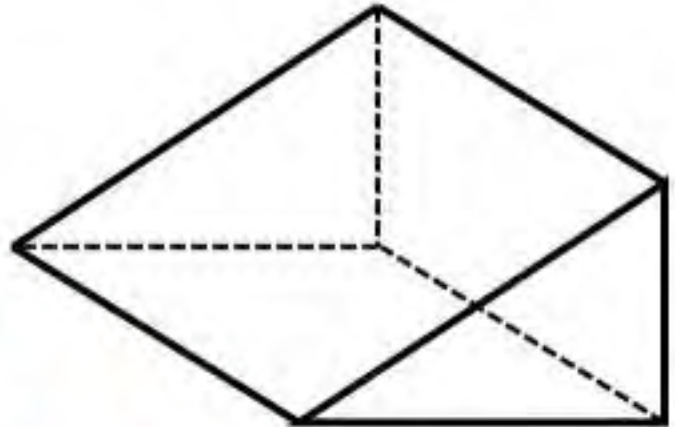
Rectangular Prism

Triangular Prism

Comparing 3D Objects

Questions

How is a rectangular prism similar and different from a triangular prism?



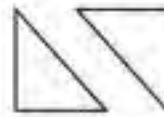
Ideas	Faces, Edges, 2D Shapes
Similarities	
Differences	

Congruent Shapes

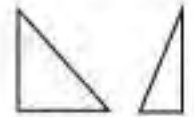
Questions

Colour the congruent shapes. There may be more than one answer

Congruent shapes have the same size and shape. This means that the sides lengths and angles are the same. Congruent Shapes can be in different positions.



Congruent



Not congruent

1)	a)	b)	c)
2)	a)	b)	c)
3)	a)	b)	c)
4)	a)	b)	c)
5)	a)	b)	c)
6)	a)	b)	c)
7)	a)	b)	c)

The Congruent House



Questions

Answer the questions below by looking at the house above

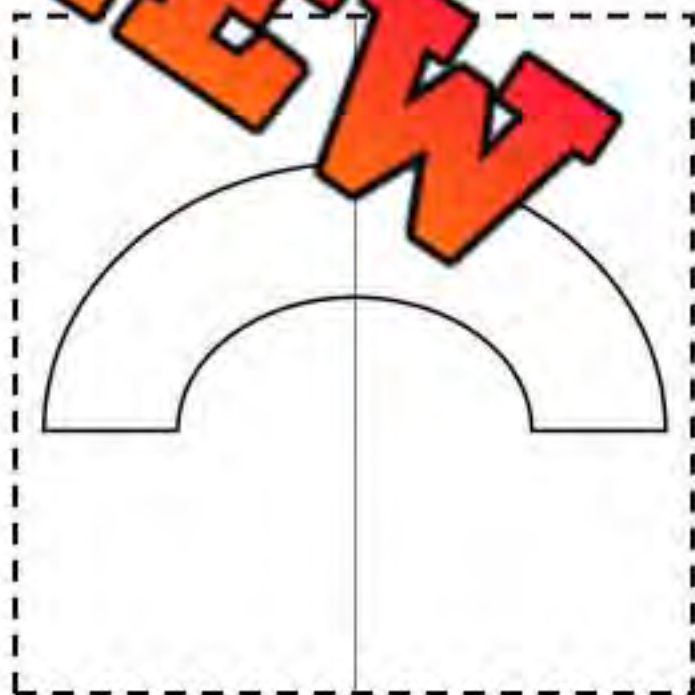
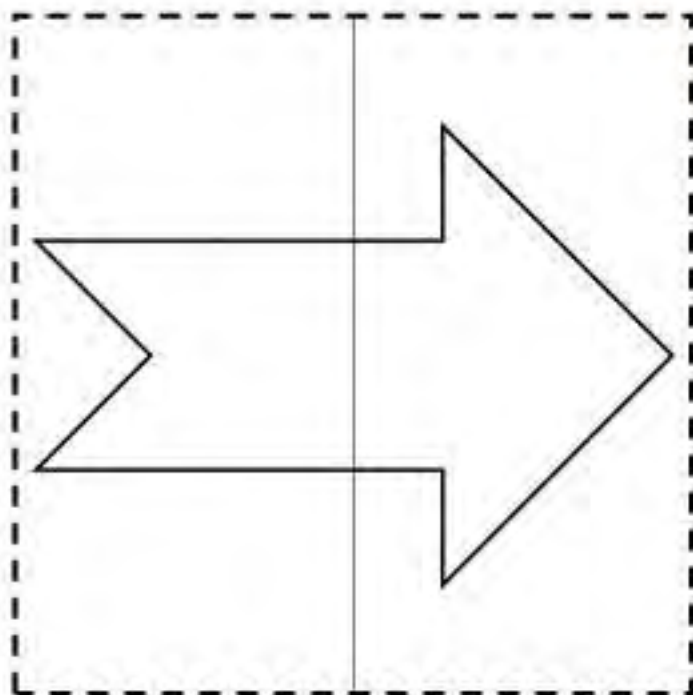
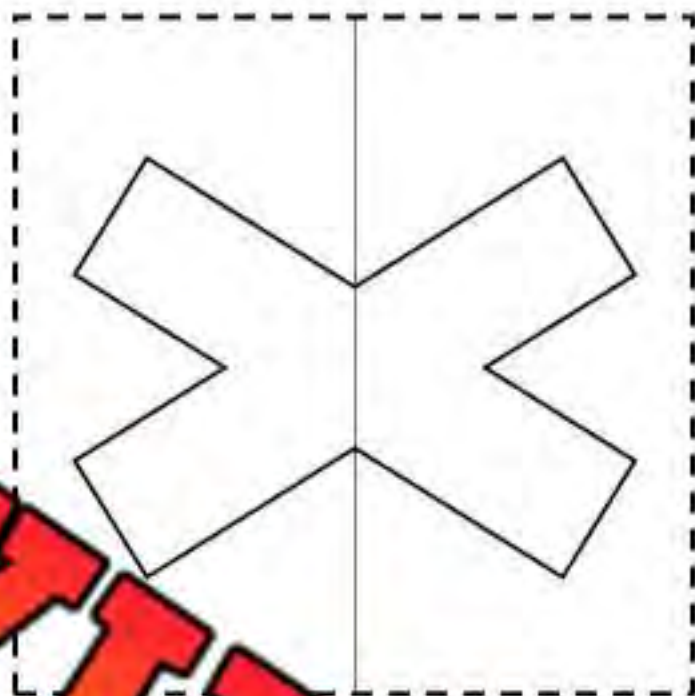
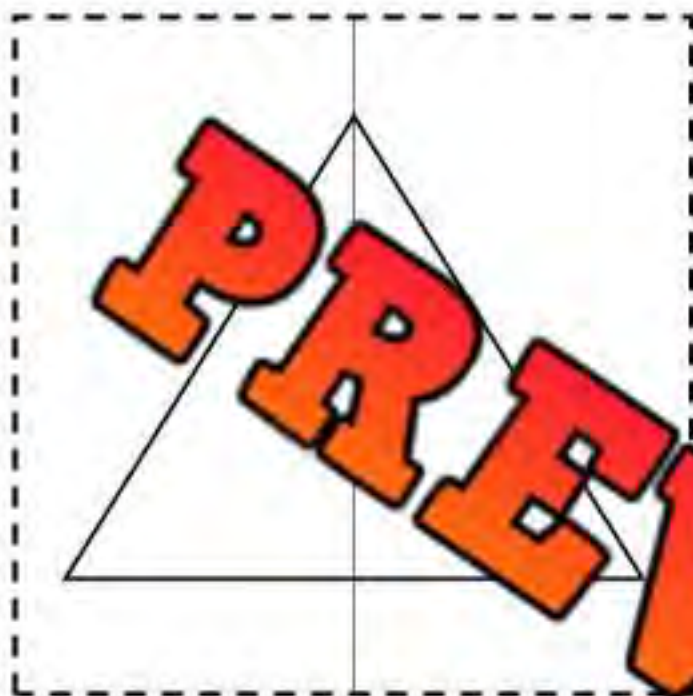
- 1) Which shape is congruent to shape A?
- 2) Which shape is congruent to shape C?
- 3) Which shapes are congruent to shape N?
- 4) Which shape is congruent to shape B?
- 5) Which shape is congruent to shape E?
- 6) Which shapes are congruent to shape D?
- 7) Which shape is congruent to shape T?
- 8) Which shape is congruent to shape L?

Name: _____

Line of Symmetry - Folding

Directions

Cut out the box. Then fold it to see if the shape is symmetrical



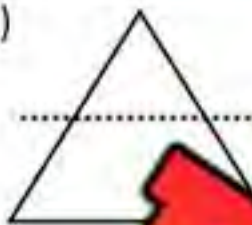
PREVIEW

Line of Symmetry

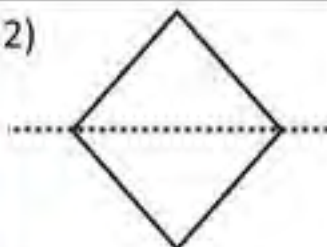
**Questions**

Is the dotted line a line of symmetry? Write yes or no.

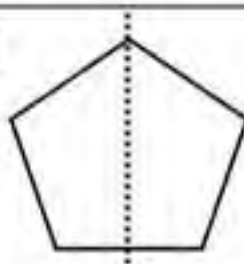
1)



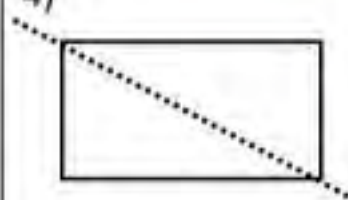
2)



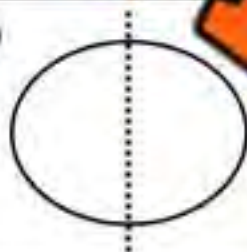
3)



4)



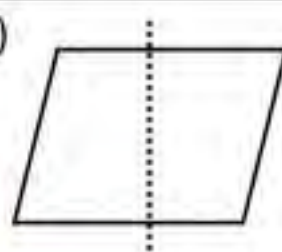
5)



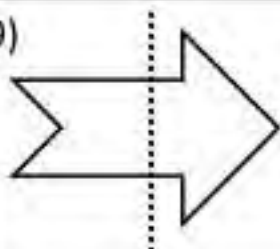
7)



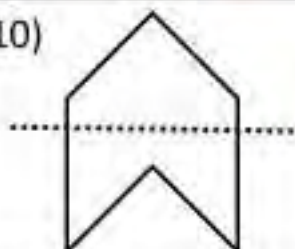
8)



9)



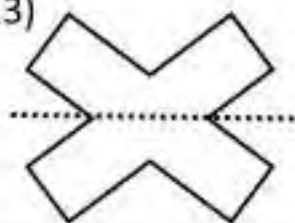
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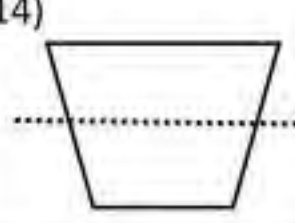
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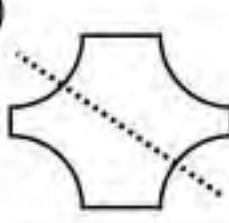
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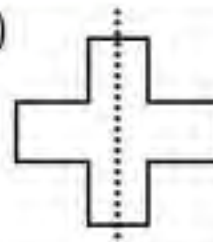
14)



15)



16)



Name: _____

Line of Symmetry – Finishing the Picture

Directions Use the grid to help you finish the picture. Draw the robot's other side.

KIDS
games
P U P

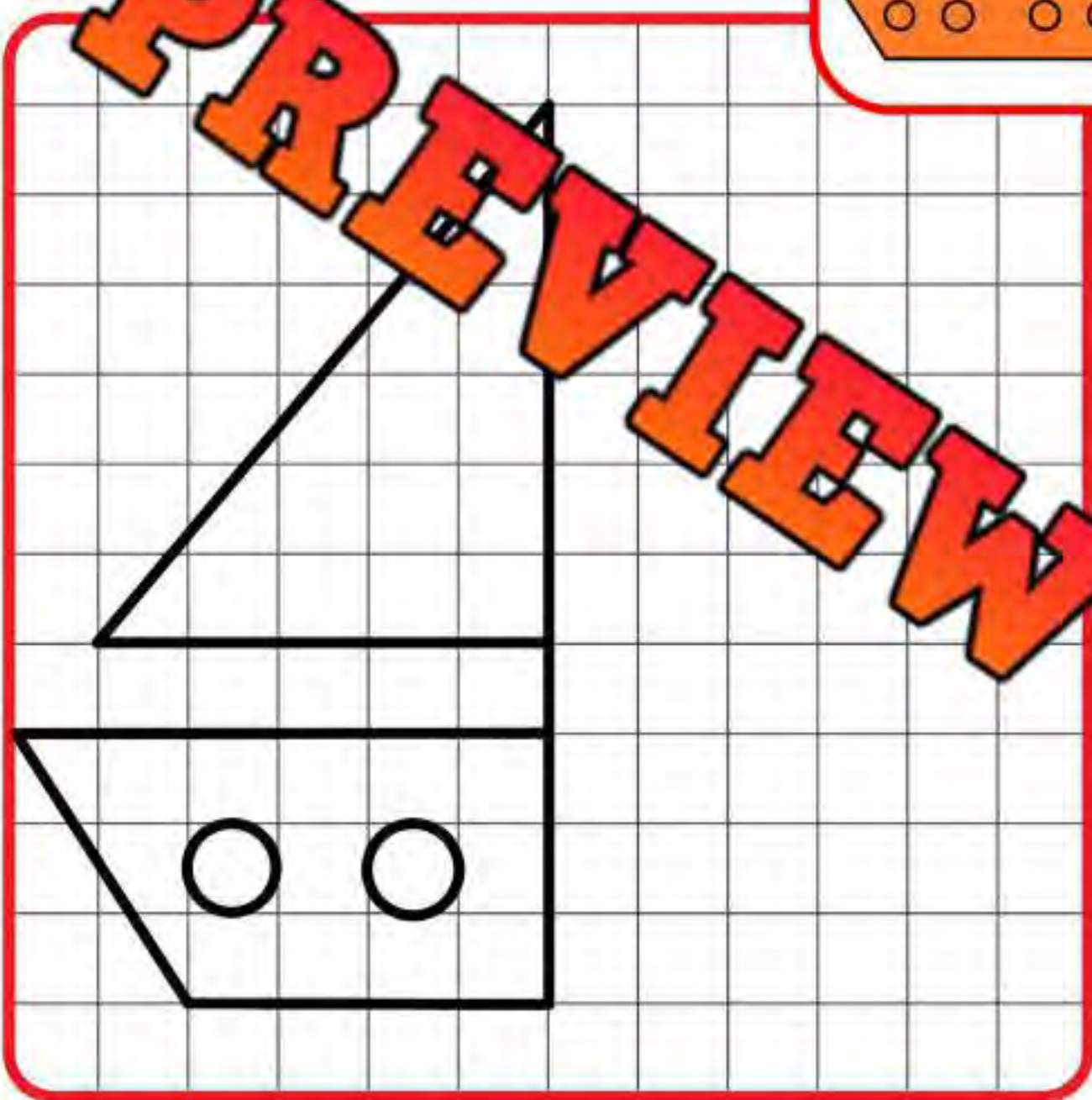
FINISH THE PICTURE



PREVIEW

Line of Symmetry – Finishing a Picture**Directions** Use the grid to help you finish the picture. Draw the boat symmetrical.

Complete the picture
using grid lines!



PREVIEW

Symmetry in Indigenous Designs

Questions

Draw the mirror image of the wolf drawn by an Indigenous artist



Symmetry in Indigenous Designs

Questions

Draw the mirror image of the totem pole below



Symmetry in Indigenous Designs



Directions Draw the mirror image of the wampum belt design.

Directions



**SENECA
NATION**

Keepers of the
Western Door

**CAYUGA
NATION**

Keepers of the Central Fire
and the heart of the Five
Nations loyal to the Great
Law of Peace

**ONEIDA
NATION**

**MOHAWK
NATION**

Keepers of the
Eastern Door

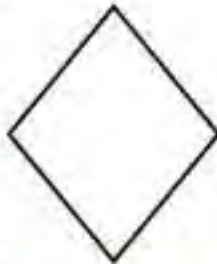
Drawing Lines of Symmetry**Questions**

Draw a line of symmetry on the shapes below

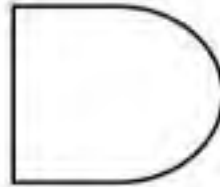
1)



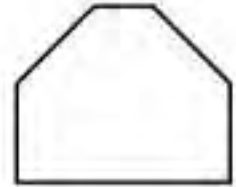
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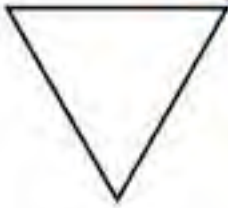
3)



4)



5)



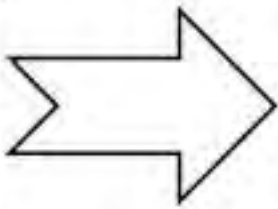
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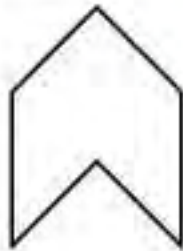
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9)



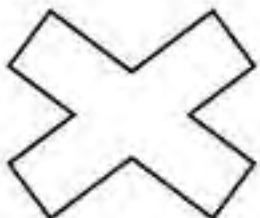
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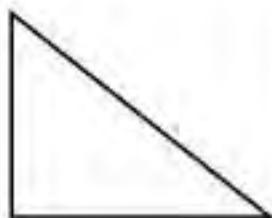
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13)



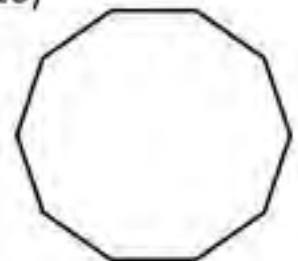
14)



15)



16)



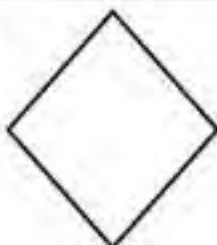
How Many Lines of Symmetry ?**Questions**

How many lines of symmetry does each shape have?

1)



2)



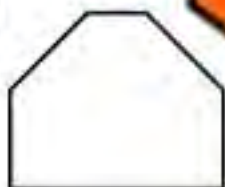
3)



4)



5)



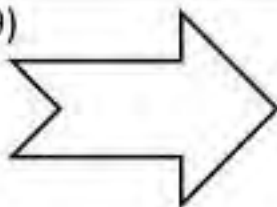
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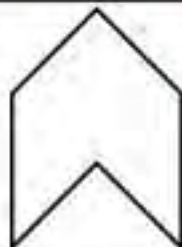
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9)



10)



11)



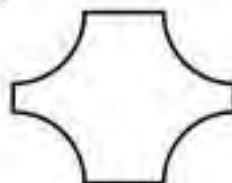
13)



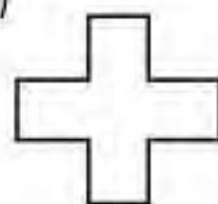
14)



15)



16)



Lines of Symmetry Word Problems

Questions

Answer the questions below



	Word Problems	Answers
1	In art class, Sarah draws a square. How many lines of symmetry does her square have?	
2	_____ as a triangle. If the flag is equilateral, how many lines of symmetry does it have?	
3	Aisha cuts out a heart for a project. How many lines of symmetry does the heart have?	
4	Jason draws a rectangle and then cuts it in half vertically. How many lines of symmetry does the original rectangle have? How many does each half have now?	
5	Jade examines an oval-shaped track. Determine the number of lines of symmetry the oval has.	
6	Liam folds a piece of paper into a kite shape. How many lines of symmetry are in Liam's kite?	

Exit Cards

Cut Out

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

Name: _____

1) How many lines of symmetry does the shape have?

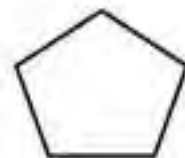


2) Draw the lines of symmetry on the shape below.



Name: _____

1) How many lines of symmetry does the shape have?

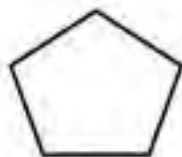


2) Draw the lines of symmetry on the shape below.



Name: _____

1) How many lines of symmetry does the shape have?



2) Draw the lines of symmetry on the shape below.



Name: _____

1) How many lines of symmetry does the shape have?



2) Draw the lines of symmetry on the shape below.



Drawing Lines of Symmetry on Real – Life Objects**Questions**

Draw a line of symmetry on the real-life images below

1)



2)



3)



4)



5)



6)



8)



9)



10)



11)



12)



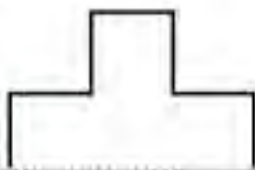
Drawing Mirror Image Using Line of Symmetry**Questions**

Draw the mirror image of the shapes below

1)



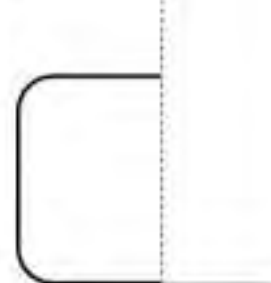
2)



3)



4)



5)



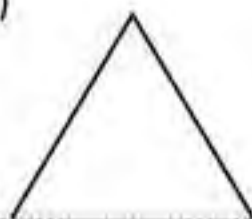
6)



8)



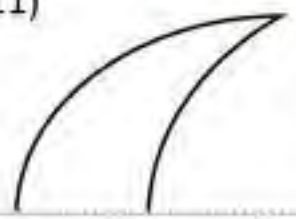
9)



10)



11)



12)



Drawing Symmetrical Shapes**Questions**

Draw symmetrical shapes below

Circle

Rectangle

Square

Pentagon


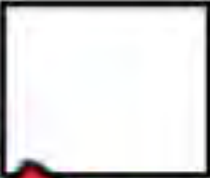
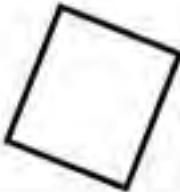
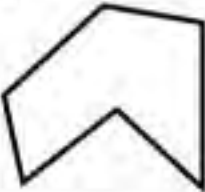
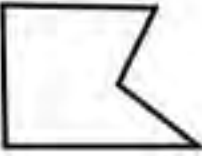
Hexagon

Octagon

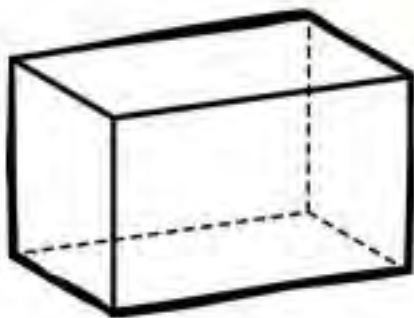
PREVIEW

Geometry Test

Part 1 How many sides and vertices does the shape have?

1.	2.	3.	4.	5.
				
_____ sides	_____ sides	_____ sides	_____ sides	_____ sides
_____ vertices	_____ vertices	_____ vertices	_____ vertices	_____ vertices

Part 2 Fill in the tables for the regular and right triangular prisms



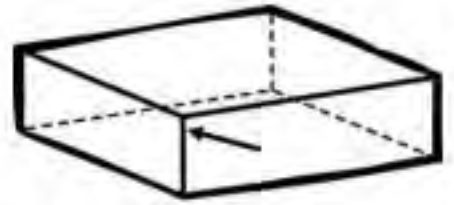
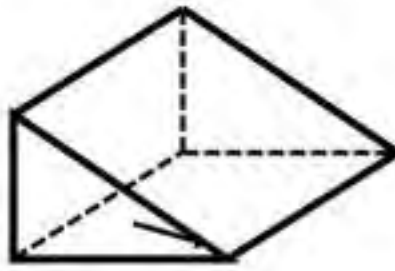
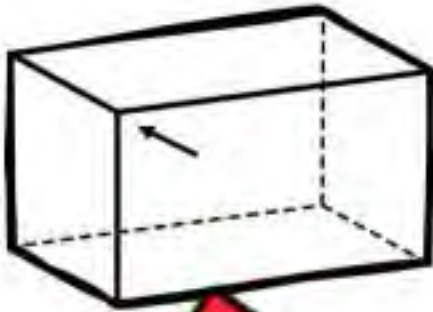
Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

Part 3

Are the angles below right, smaller, or larger?



Right Smaller Larger

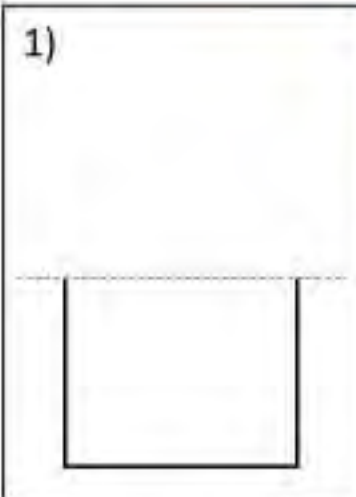
Right Smaller Larger

Right Smaller Larger

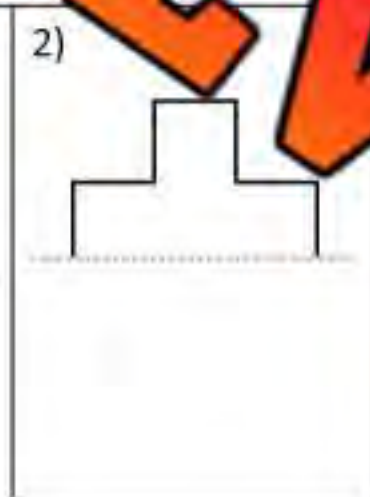
Part 4

Draw a net for the shapes below

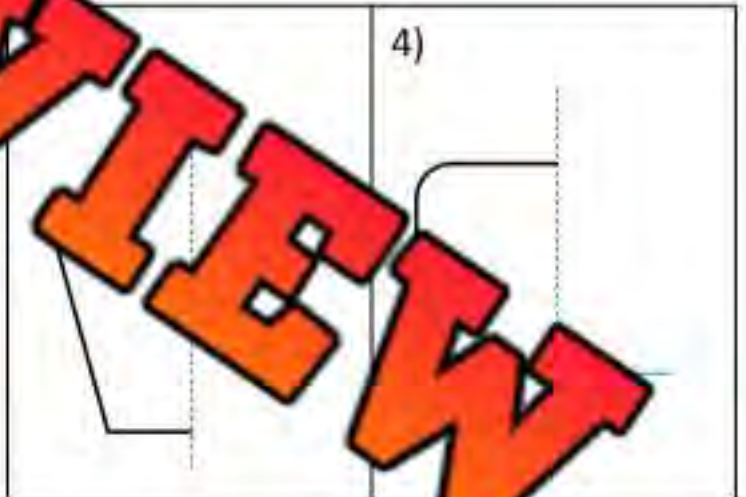
1)



2)



4)



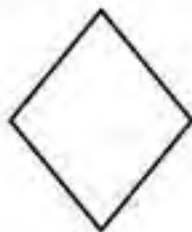
Part 5

Draw 2 or more lines of symmetry on the shapes below

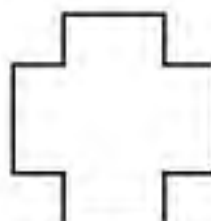
1)



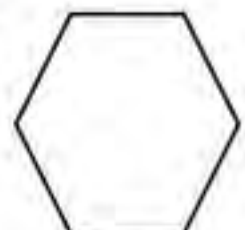
2)



3)



4)



Grade 4

Statistics and Probability Strand

	Curriculum Expectations	Pages
SP4.	Demonstrate an understanding of many-to-one correspondence by: <ul style="list-style-type: none">• comparing correspondences on graphs	

Preview of 50 pages from this product that contains 103 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? (only 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 _____ questions are statistical questions – 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 use a computer 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

Writing Statistical Questions

When we write a statistical question, we need to think about what we want to learn and who we want to learn about. Who we ask our statistical question is our population.



Subject	Population	Question
Hockey	The Saskatoon Wolves Atom Team	How many goals have each player on the Saskatoon Wolves Atom hockey team scored?
Video Games	Students in my class	Which video game system do the grade 4's like the best - PlayStation, Nintendo, or Xbox?

Practice

Write your statistical questions about the subjects below

Subject	Population	Question
1) School	Who will ask?	
2) Sports		
3) Food		
4) Movies		
5) Computers		

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

Questions	Prediction	
1) Which drink is the most popular in my class - milk, juice, water, pop, or latte?		
2) Which subject does your class like best - 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

Exit Cards

Cut Out

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

Name: _____

1) Write a statistical question related to school.

2) Predict the most and least popular answers you would expect if you asked your class.

Name: _____

1) Write a statistical question related to school.

2) Predict the most and least popular answers you would expect if you asked your class.

Name: _____

1) Write a statistical question related to school.

2) Predict the most and least popular answers you would expect if you asked your class.

Name: _____

1) Write a statistical question related to school.

2) Predict the most and least popular answers you would expect if you asked your class.

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? _____ Most popular: _____

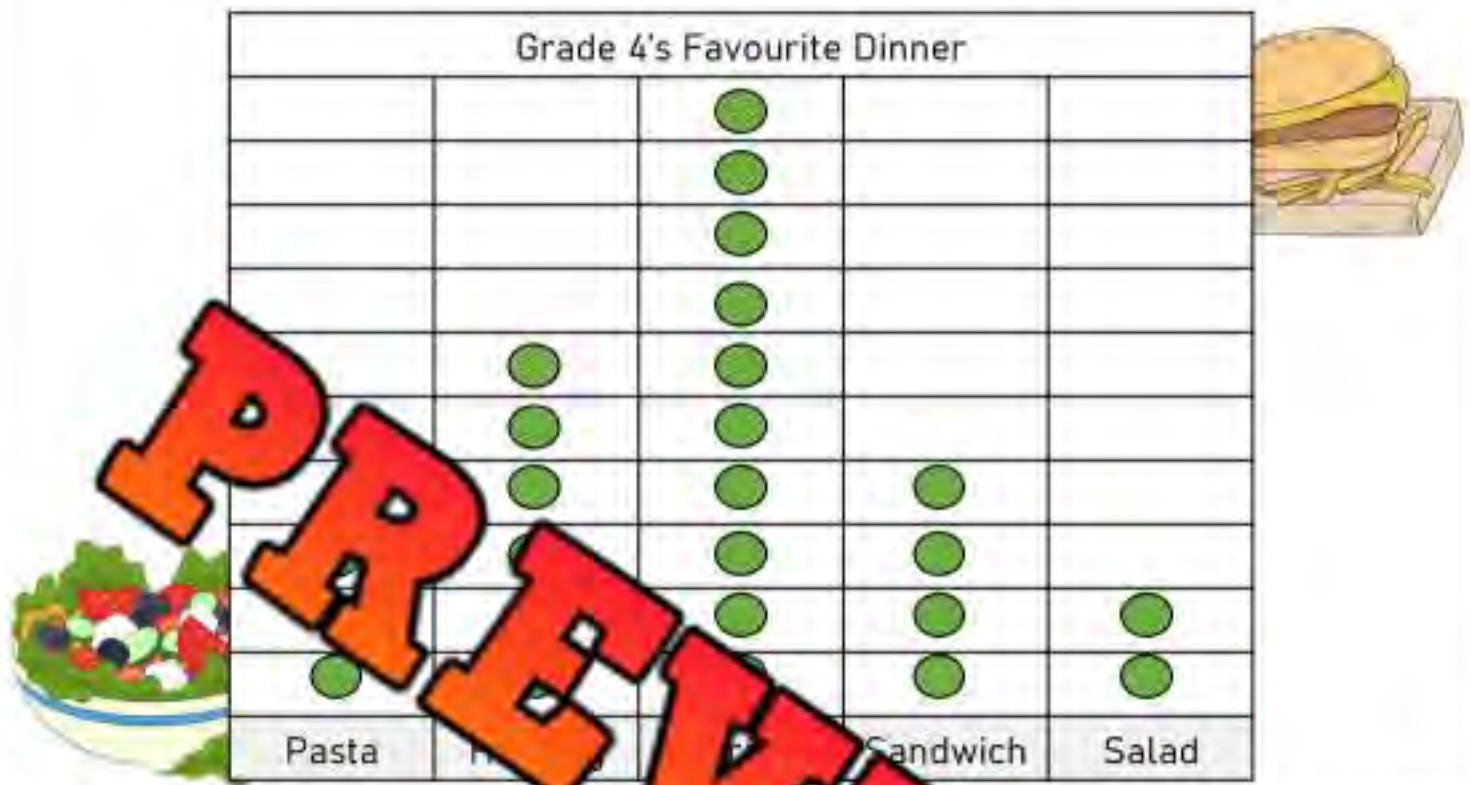
c) What did you learn about the data?

_____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





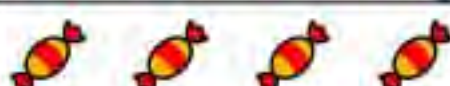
Read the line plot and answer the questions.


- 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

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?

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 4's need to win?	

Exit Cards

Cut Out

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

Name: _____

Write down the number of shoes each student has.

Friend	Number of Shoes Students Have	Total
Liam		
Olivia		
Ethan		
Ava		
 = 7 Shoes		

Name: _____

Write down the number of shoes each student has.

Friend	Number of Shoes Students Have	Total
Liam		
Olivia		
Ethan		
Ava		
 = 7 Shoes		

Name: _____

Write down the number of shoes each student has.

Friend	Number of Shoes Students Have	Total
Liam		
Olivia		
Ethan		
Ava		
 = 7 Shoes		

Name: _____

Write down the number of shoes each student has.

Friend	Number of Shoes Students Have	Total
Liam		
Olivia		
Ethan		
Ava		
 = 7 Shoes		

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.

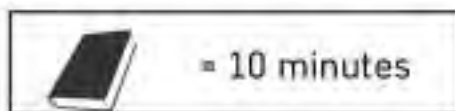


Sunday	15
Monday	30
Tuesday	20
Wednesday	15
Thursday	35
Friday	40
Saturday	20



PREVIEW

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday



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 Vertical Pictogram

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

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

Game 1	Game 2	Game 3	Game 4	Game 5

--

- 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: _____

Options				
Tally				
Frequency				

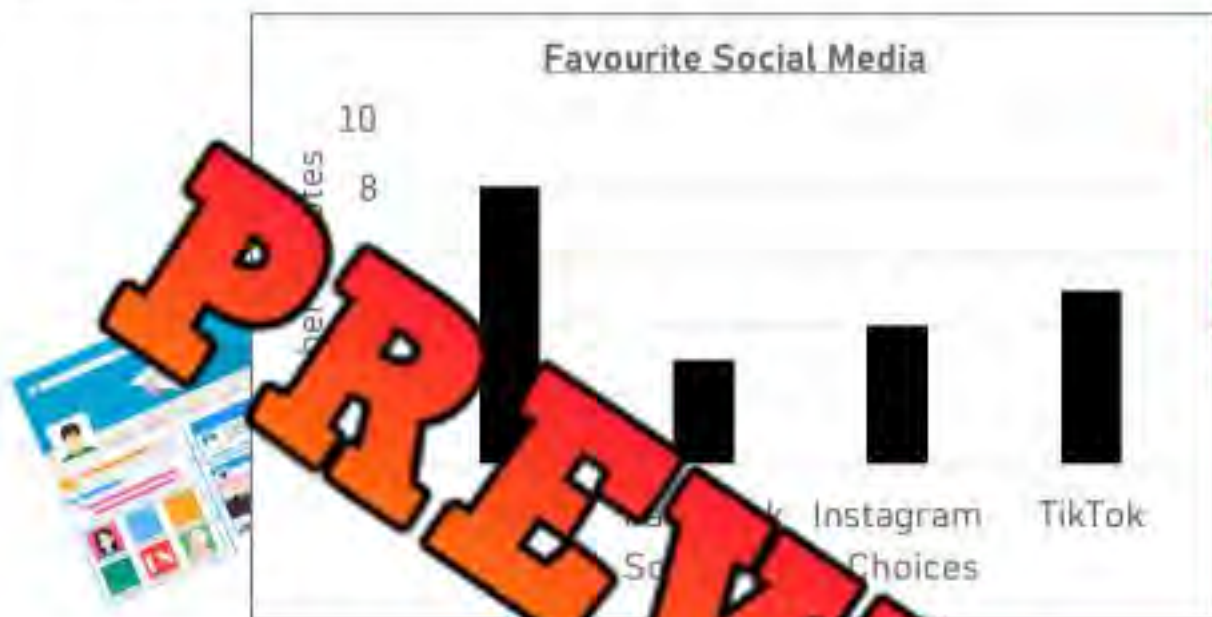
LEGEND

= _____

- Questions**
1. Which option was the most popular?
 2. How many people liked the most popular option? How many people liked the least popular option?
 3. What did you learn about your class?

Surveying a Suitable Representation

Bella wants to know what the most popular social media app is at her school. She decides to ask 20 students from her grade 4 class.



a) Which social media was the most popular?

b) Did Bella find out which social media was the most popular in the school? Explain.

c) Who should she have asked if she wanted to know what the most popular social media app was in her entire school?

d) If she only wanted to survey around 20 kids in total, how could she do it so that she still found out what the most popular app was in the whole school?

Surveying a Suitable Representation

Liam is a restaurant owner who wants to find out which dessert is the most popular so he can know what to serve at his restaurant. His restaurant serves mostly seniors who are 65 years old or older.

To collect his data, Liam goes to a skatepark and asks 60 people there. His data has been displayed in a bar graph below.



Options	Brownie	Cheesecake	Ice cream	Pie
Frequency				

a) Which dessert should Liam serve at this restaurant according to the survey?

b) Did Liam find out which dessert seniors preferred? Explain why or why not.

c) Where could Liam have gone to complete his survey? Why would your choice of location be better?

Inuit Living in Canada

Statistical Question

Which 5 provinces/territories do most Inuit people live in?



Number of Thousands of Inuit People Living in the Provinces/Territories of Canada



Interpret

What did you learn from the graph?

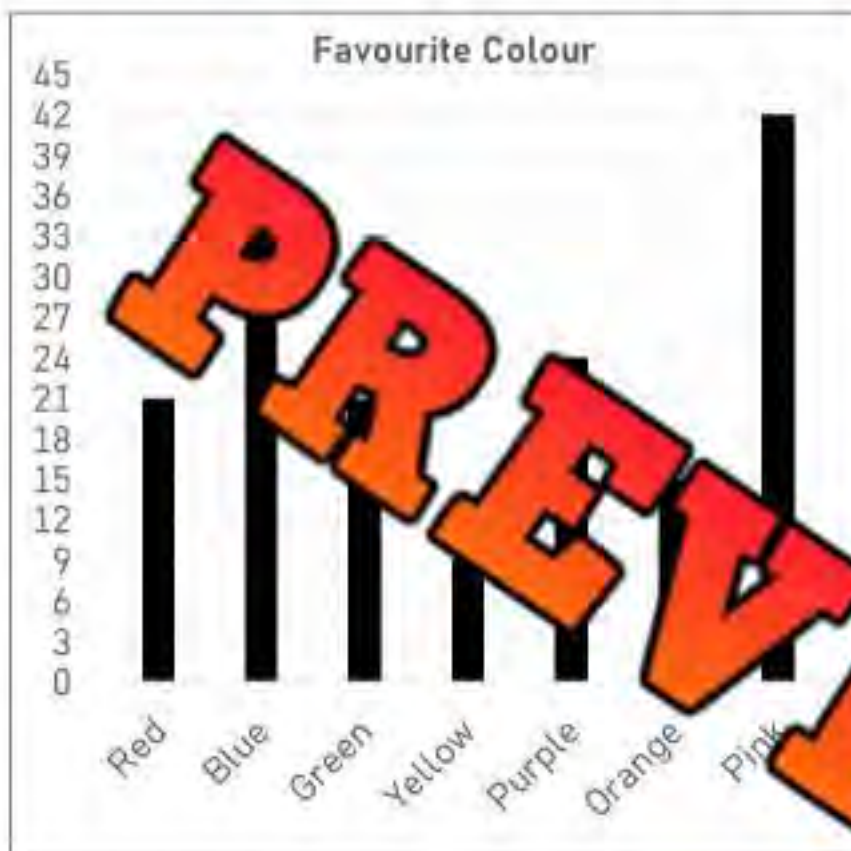
1) Where do most Inuit people live in Canada?

2) What surprised you about the data?

3) Where in Canada do most Inuit people live - in the north or south? Where do you think they live in provinces - the northern or southern regions?

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?

Horizontal Bar Graph – Favourite Hobby

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



a) Which hobby is the most popular?

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

(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

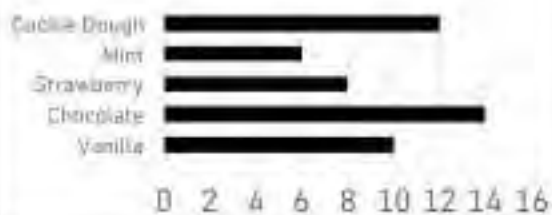


1) Which category of ice cream is most popular?

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?

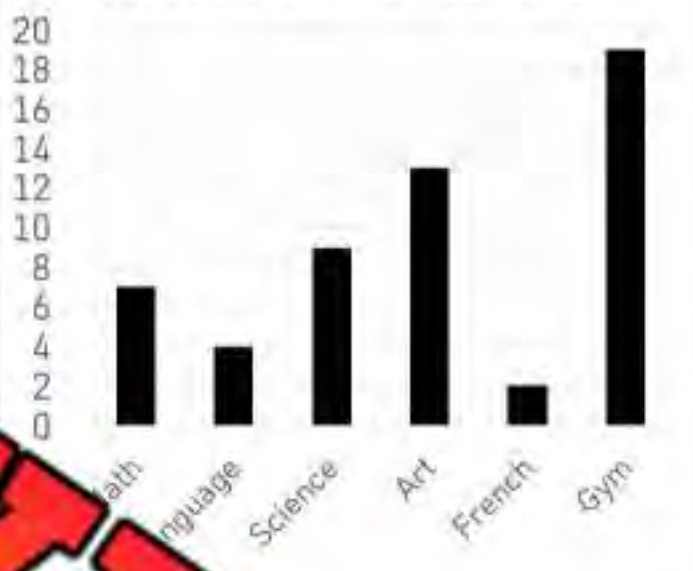
One-to-One vs Many-to-One

The grade 4's from Wellington Elementary School were asked which subject was their favourite. The results have been displayed in two different bar graphs.

Favourite Subject - Scale = 1



Favourite Subject - Scale = 2



a) Which subject was most popular?

b) Which subject was the least popular?

c) How many more students liked gym than French?

d) How many students were surveyed?

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

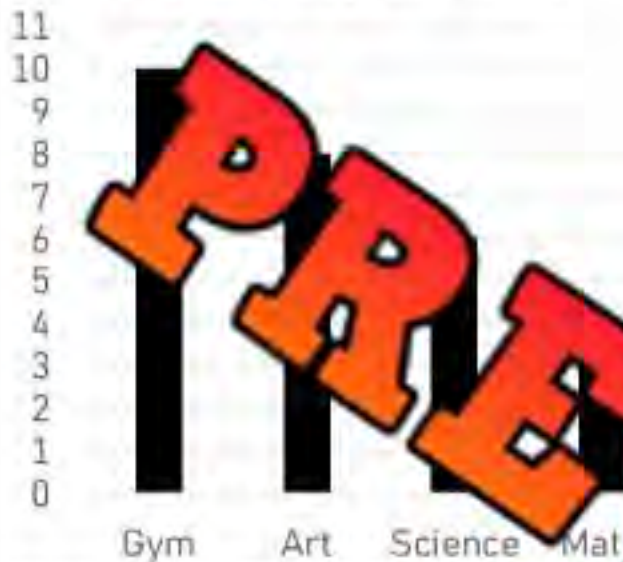
f) When is it better to use larger numbers for your scale? When should you use smaller numbers, like one-to-one?

Favourite Subject – Examining Scale

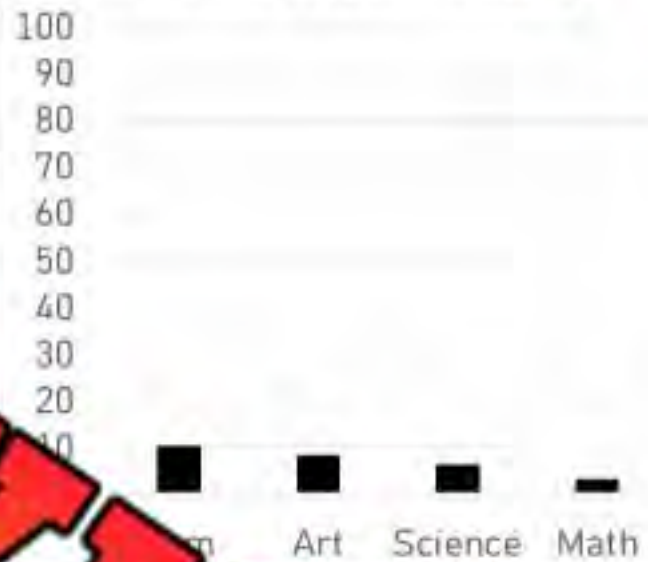
The two graphs below display the same data. Examine both graphs and answer the questions below.



Favourite Subject – Graph A



Favourite Subject – Graph B



Questions

What do you notice about the graphs?

a) What is the scale in Graph A?

b) What is the scale in Graph B?

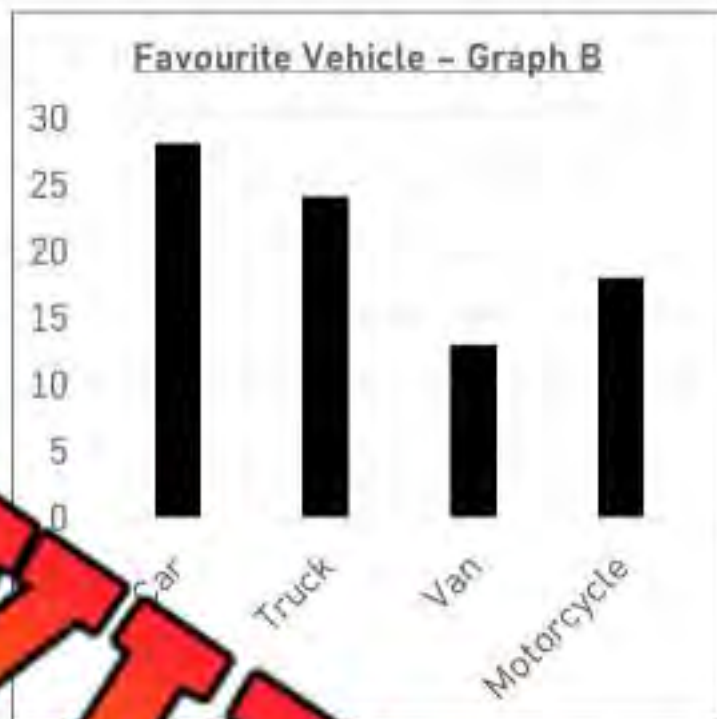
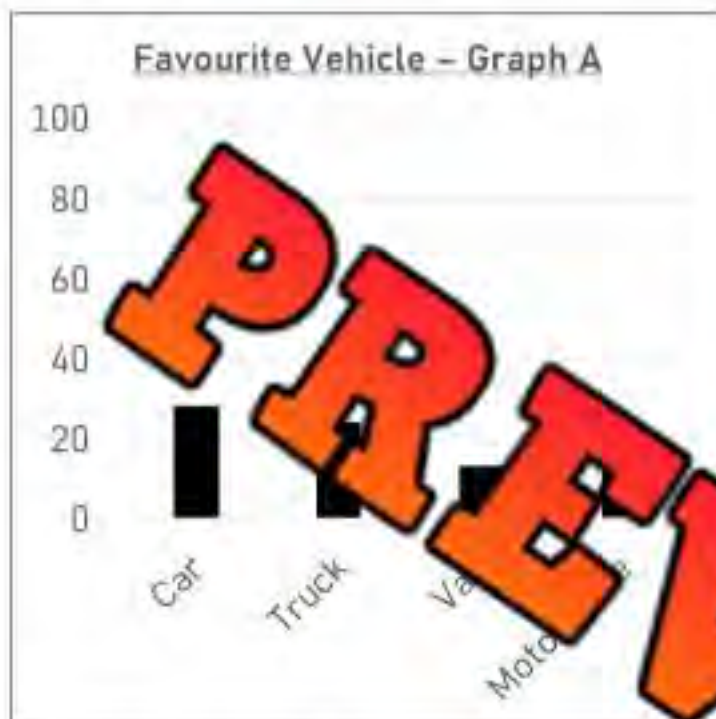
c) Which graph uses more of the space?

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

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

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 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 better? Why?

e) What other scales could you use for the data?

- Go up by _____
- Go up by _____

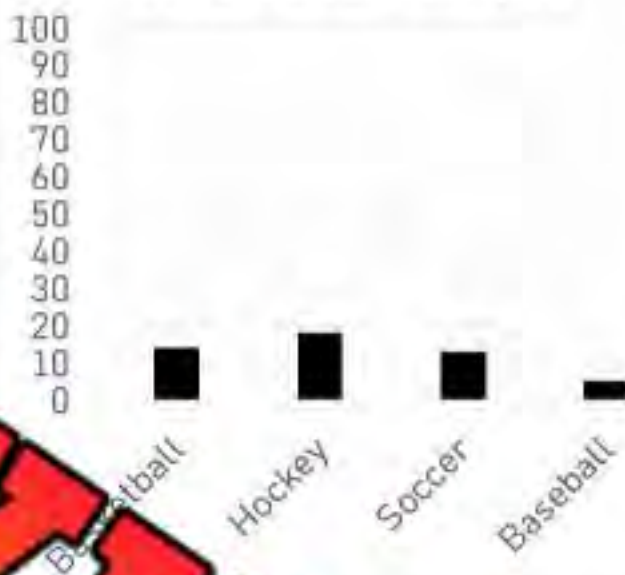
Favourite Sport – Examining Scale

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

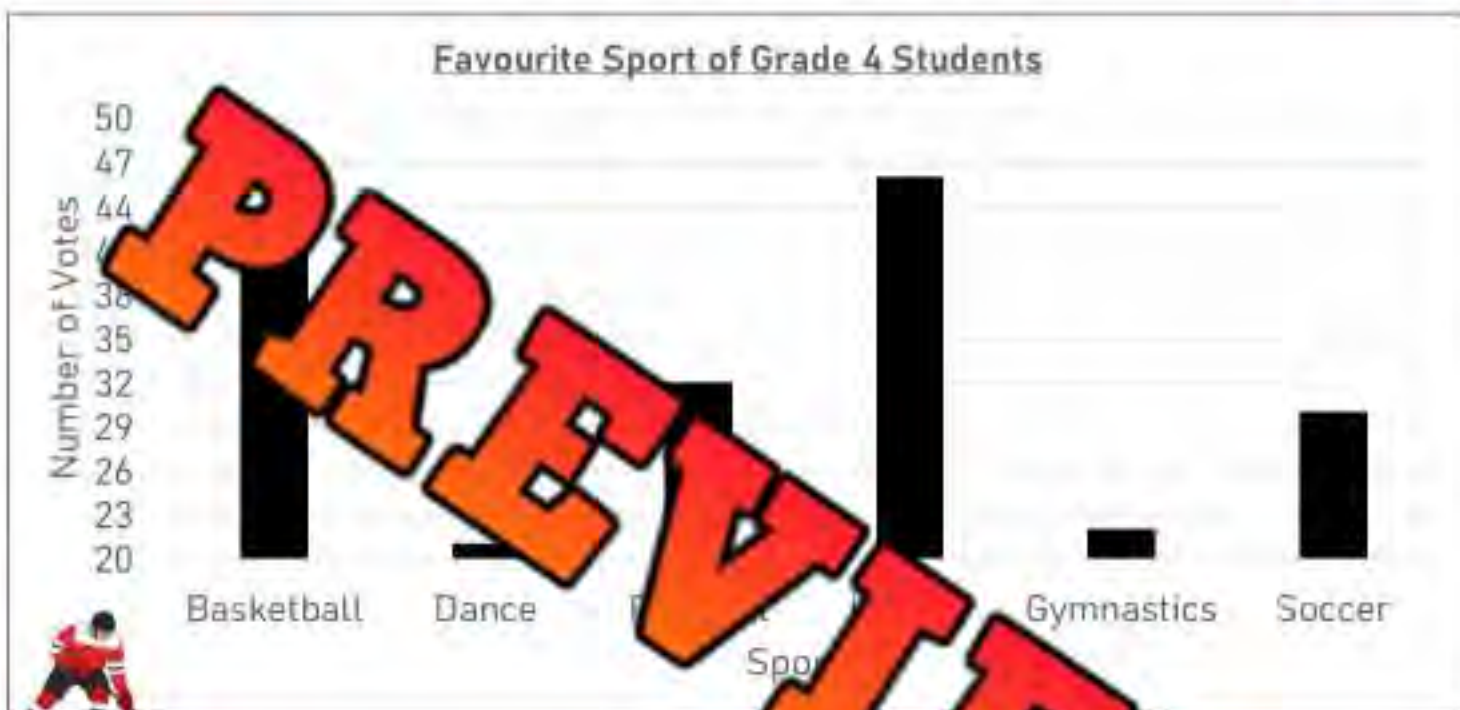
What do you notice about the two graphs?

- What is the scale in Graph A?
- What is the scale in Graph B?
- Which graph uses more of the space?
- Which graph is easier to read and interpret? Why is that graph better?

- Why is it important to choose an appropriate scale?

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?

(x) _____

(y) _____

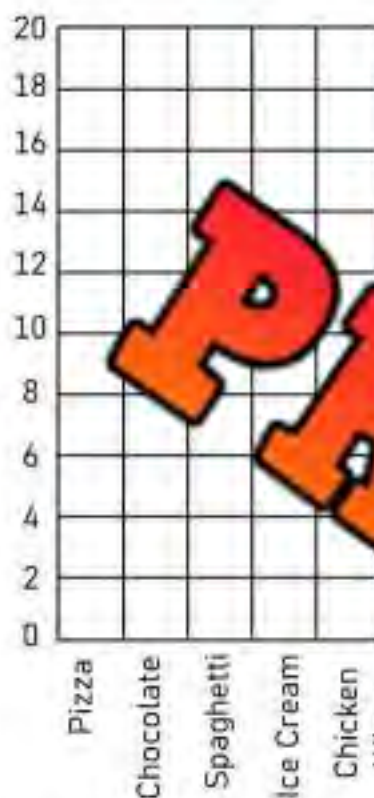
e) How many more votes did hockey get over dance?

f) How many students participated in the survey?

Drawing Bar Graphs

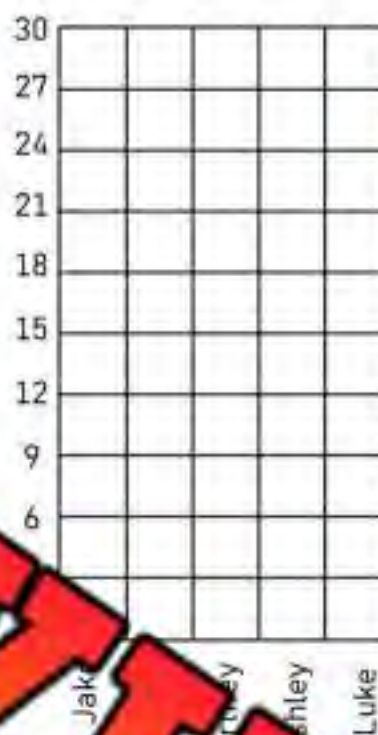
Questions

Draw the bars for each of the bar graphs below



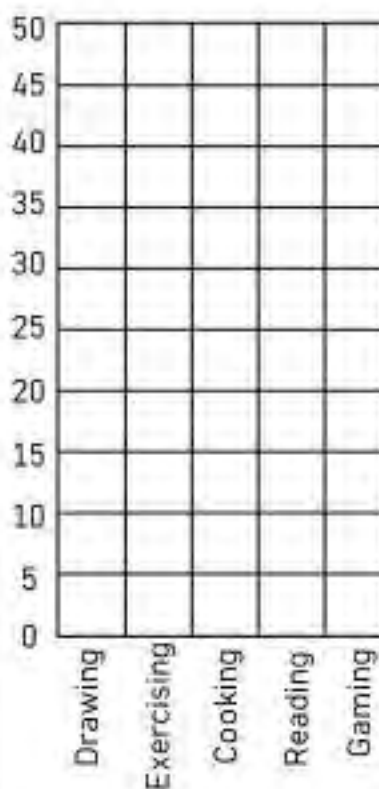
Favourite Food	# of votes
----------------	------------

Pizza	16
Chocolate	14
Spaghetti	8
Ice Cream	11
Chicken Wings	11



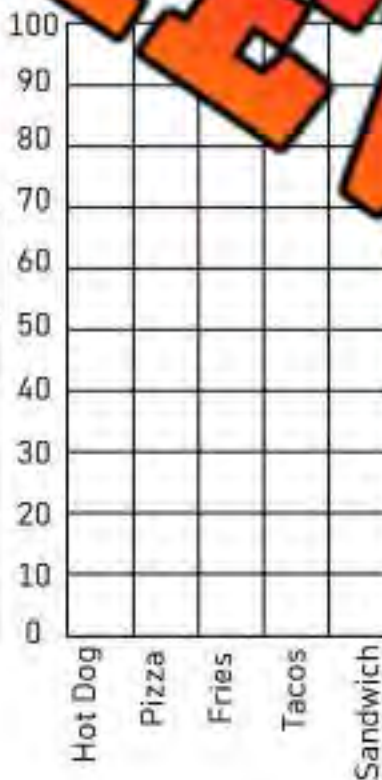
Player	# of points
--------	-------------

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

Exit Cards

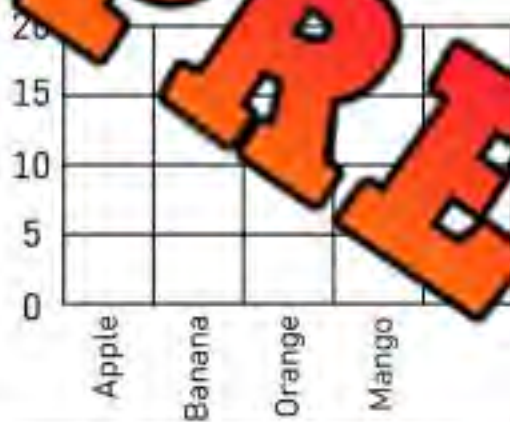
Cut Out

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.

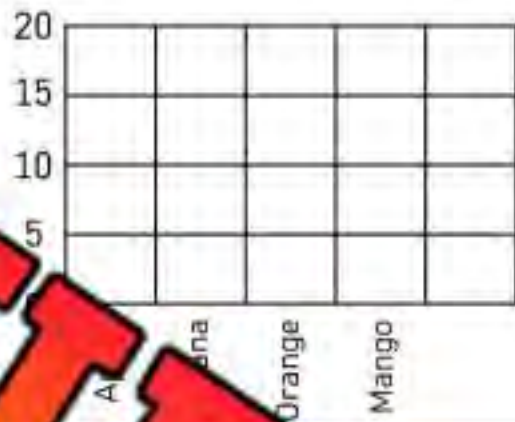
Fruit	Apple	Banana	Orange	Mango
Votes	10	10	15	5



Name: _____

Draw the bars for the bar graphs below.

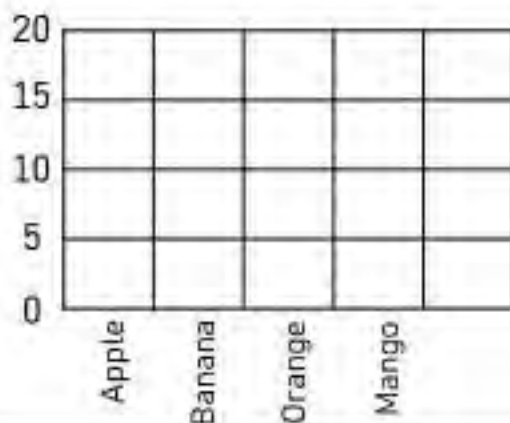
Fruit	Apple	Banana	Orange	Mango
Votes	20	10	15	5



Name: _____

Draw the bars for the bar graphs below.

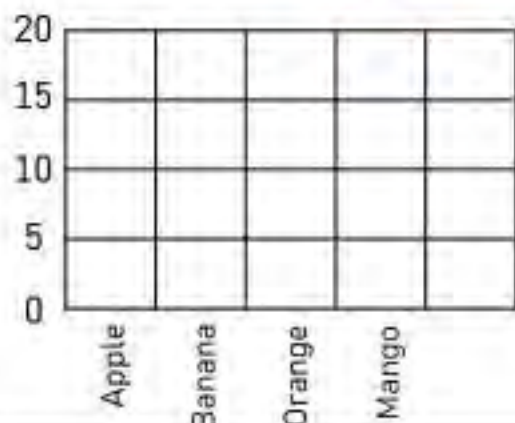
Fruit	Apple	Banana	Orange	Mango
Votes	20	10	15	5



Name: _____

Draw the bars for the bar graphs below.

Fruit	Apple	Banana	Orange	Mango
Votes	20	10	15	5



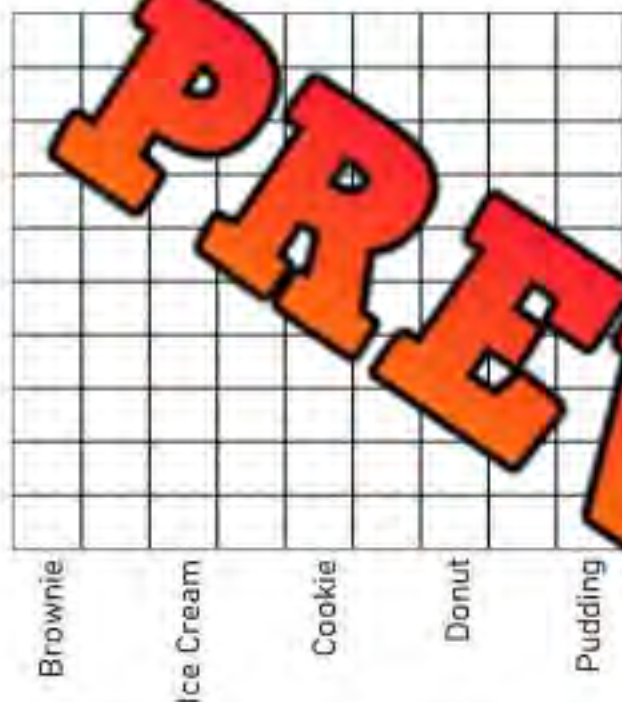
Creating Scale

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.

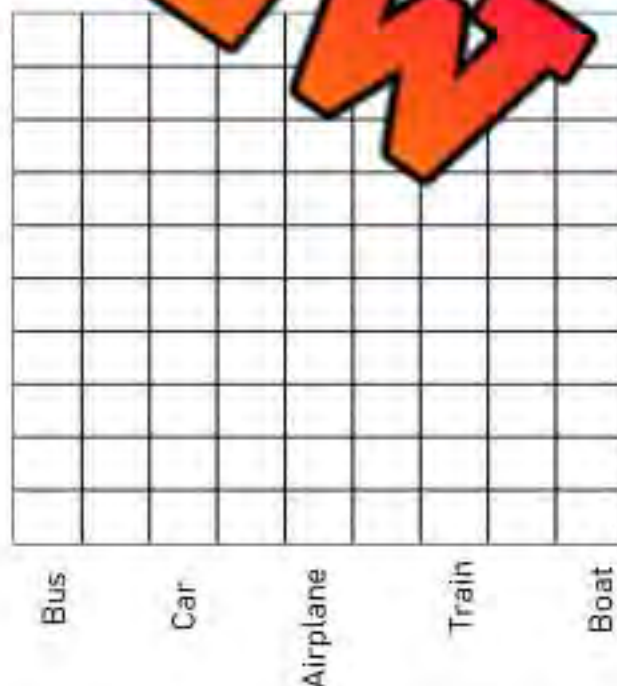
Step 3: Decide what to go up by to ensure you have enough space to plot all the data.



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



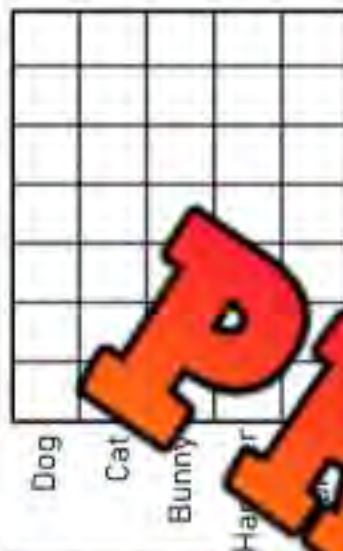
Favourite Transportation Method	# of votes
Bus	10
Car	50
Airplane	90
Train	70
Boat	80



Creating Scale

Questions

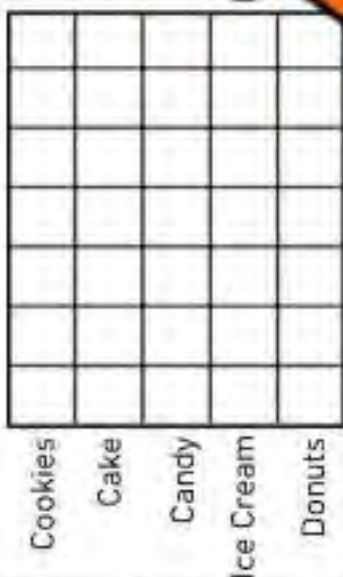
1) Read the numbers and decide which scale to use. 2) Draw your bar graphs



Pets	Votes
Dog	3
Cat	12
Bunny	18
Hamster	15
Turtle	9



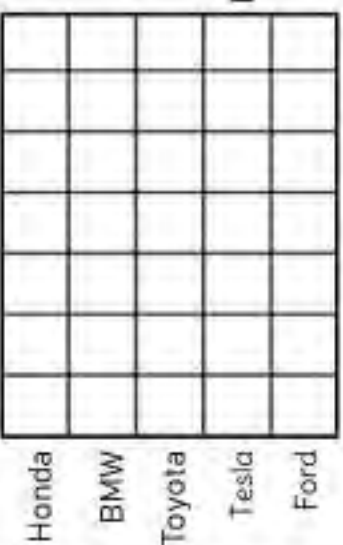
Brand	Votes
Nike	10
Puma	6
Adidas	3
Under Armour	8
Reebok	12



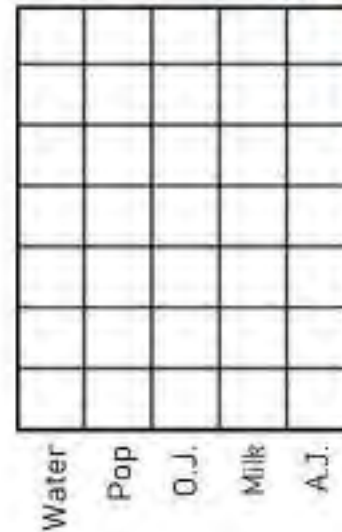
Food	Votes
Cookies	15
Cake	20
Candy	35
Ice Cream	25
Donuts	10



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



Cars	Votes
Honda	200
BMW	450
Toyota	225
Tesla	675
Ford	350



Drinks	Votes
Water	700
Pop	1300
Orange Juice	550
Milk	150
Apple Juice	825

Collecting Data

Directions

Create your own statistical question and survey your classmates

Statistical Question

Example: Which flavour of ice cream is most popular among grade 4s?

Category

Tally

Frequency

PREVIEW

Interpret

What did you learn from your data?

Interpreting Your Survey Results

1. How many people did you survey? _____
2. Which category was the most popular? _____
3. Which category was the least popular? _____
4. If you asked your entire school, which category do you think would win? Explain.

5. Did any of the survey results surprise you?
I'm surprised that _____

Name: _____

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

Title: _____

PREVIEW



Quantitative vs Qualitative Observations

Qualitative Observations

use your senses to observe the results



Quantitative Observations

use measurement tools to make observations



Part 1 Observe the picture below with your senses. Write as many qualitative observations as you can (imagine the smell/noise/taste/feel)



Smell: _____

Feel: _____

See: _____

Part 2 Pretend you can measure the weight, speed, and height of the animals below. Provide a quantitative observation (estimation of these)



Height: _____ cm

Weight: _____ kg

Speed: _____ km/h



Height: _____ cm

Weight: _____ kg

Speed: _____ km/h



Height: _____ cm

Weight: _____ kg

Speed: _____ km/h



Height: _____ cm

Weight: _____ kg

Speed: _____ km/h

Qualitative vs Quantitative Data

Quantitative data

Data that uses numbers (measured, counted)
- length, height, area, weight, time, etc.

Qualitative data

data that uses words (categories)
- choices, favourites, foods, colours, etc.

Part 1

 Read the description of the data and circle if it is quantitative or qualitative

1) Length of a foot in feet	Quantitative	Qualitative
2) Population in cities in North and South America	Quantitative	Qualitative
3) Animals that live in the ocean	Quantitative	Qualitative
4) Number of medals won by a country in the Olympics	Quantitative	Qualitative
5) How many movies you watched last year	Quantitative	Qualitative
6) Brand of shoes you're wearing	Quantitative	Qualitative
7) Favourite drink at a café	Quantitative	Qualitative
8) How many steps you get a day	Quantitative	Qualitative
9) Favourite type of exercise	Quantitative	Qualitative
10) How many hours of sleep you get a night	Quantitative	Qualitative

Part 2

 Write a quantitative and qualitative description for each topic below

1) Topic - Sports	
Quantitative	
Qualitative	
2) Topic - School	
Quantitative	
Qualitative	

Exit Cards

Cut Out

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

Name: _____

Read the description and circle if it is quantitative or qualitative.

1. Number of siblings
Quantitative / Qualitative
2. Preferred social media platform
Quantitative / Qualitative
3. Number of pets owned
Quantitative / Qualitative
4. Type of transportation used
Quantitative / Qualitative

Name: _____

Read the description and circle if it is quantitative or qualitative.

1. Number of siblings
Quantitative / Qualitative
2. Preferred social media platform
Quantitative / Qualitative
3. Number of pets owned
Quantitative / Qualitative
4. Type of transportation used
Quantitative / Qualitative

Name: _____

Read the description and circle if it is quantitative or qualitative.

1. Number of siblings
Quantitative / Qualitative
2. Preferred social media platform
Quantitative / Qualitative
3. Number of pets owned
Quantitative / Qualitative
4. Type of transportation used
Quantitative / Qualitative

Name: _____

Read the description and circle if it is quantitative or qualitative.

1. Number of siblings
Quantitative / Qualitative
2. Preferred social media platform
Quantitative / Qualitative
3. Number of pets owned
Quantitative / Qualitative
4. Type of transportation used
Quantitative / Qualitative

Collecting Data - Qualitative

We collect data so that we can learn more about something we are interested in. We also collect data to solve a problem.



Examples:

Area of Interest: "What is your favourite animal?"

Solving a Problem: "Are you coming to the party on Saturday?" (this solves the problem of how many will be attending the party).

Survey Q:

Area of

Collect data by asking your classmates your survey question

Survey Question

Example: What is your favourite colour?

Categories

Tally

Frequency

Interpreting Your Survey Results

1. How many people did you survey? _____
2. Which category was the most popular? _____
3. Which category was the least popular? _____
4. If you asked your entire school, which category do you think would win? Explain.

5. Did any of the survey results surprise you?

I'm surprised that _____

Collecting Data - Quantitative

When we collect quantitative data, we are asking a survey question that results in a numbered answer. For example: "How many pets do you have?"



Example:

Area of Interest: "How many hours do you watch TV a day?"

Solving a Problem: "How many hot dogs will you eat at the party this weekend?"
(this solves the problem of how many hot dogs you'll need to buy for your party).

Survey Question _____ collect data by asking your classmates your survey question
Area of Interest _____

Survey Question _____

Example: How many books did you read this week?

Categories				
Tally				
Frequency				

Interpreting Your Survey Results

1. How many people did you survey? _____
2. Which number/number range was the most popular? _____
3. Which number/number range was the least popular? _____
4. If you asked your entire school, which number/number range do you think would win? Explain. _____
5. Did any of the survey results surprise you?

I'm surprised that _____

Name: _____

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

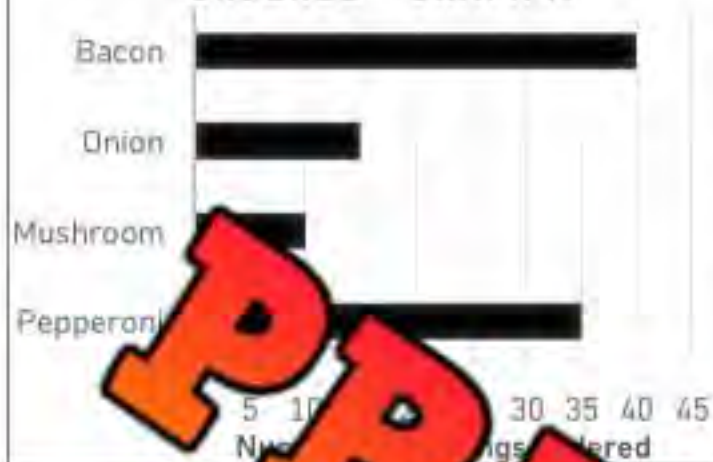
Title: _____

PREVIEW

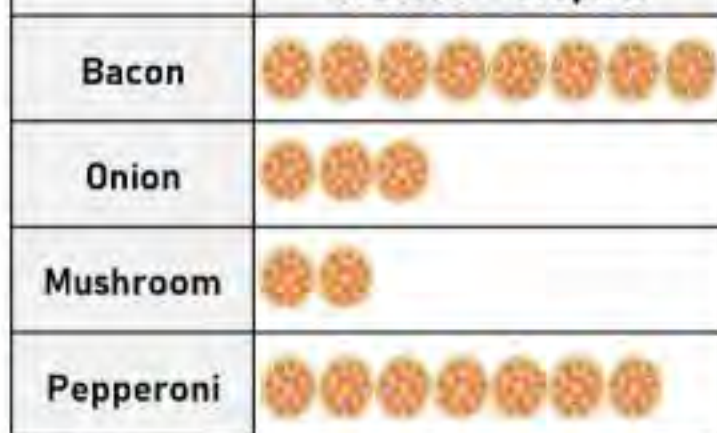
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Displaying Data Using Different Graphs

LAST 100 PIZZA TOPPINGS
ORDERED - GRAPH A



Last 100 Pizza Toppings
Ordered - Graph B



 = 5 toppings

Questions

Answer the questions below

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

b) If you were reading this data quickly, which graph would be 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?

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.

- Bottle or cups for flipping
- A smartboard or projector to display bar graphs
- Timer (stopwatch or smartboard app)
- Question cards based on the data
- Scoreboard to keep track of results



Instructions

How you will complete the activity.

1. Divide the class into small teams, ideally of 5 students each.
2. Prepare a series of bar graphs to display on the smartboard, along with corresponding question cards that ask about the data in the graphs.
3. One team at a time comes to the front where the graphs are 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.

Graph 1

What did you learn from the graph?



Graph 2

What did you learn from the graph?



Graph 4

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 units represented by all bars?

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

Are there any categories that have similar values?

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?

Unit Test – Statistics and Probability

Part 1 Read the description of the data and circle if it is quantitative or qualitative

1) Number of cans collected for the food drive	Quantitative Qualitative
2) Height of the animals in a zoo	Quantitative Qualitative
3) Favorite color of grade 4 students	Quantitative Qualitative
4) Snowfall in January	Quantitative Qualitative
5) Which hobby do you like the most?	Quantitative Qualitative

Part 2 Draw the bars for each of the graphs below



Favourite Food	# of votes
Pizza	12
Chocolate	6
Spaghetti	8
Ice Cream	16
Chicken Wings	6

Pizza
Chocolate
Spaghetti
Ice Cream
Chicken Wings



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

Jake
Nathan
Courtney
Ashley
Luke

Part 3

Read the graph and answer the questions below

Mr. Simpson collected data from his grade 4 class. He asked them what their favourite food is. He graphed the results in the bar graph below.



a) Which food was the most popular?

b) How many more students voted for pizza than salad?

c) What is the scale of the graph?

d) Was the "other" category more popular than pizza and burgers together?

e) Which three foods together add up to the total number of votes pizza received?

f) How many students 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?