



Preview – Information



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Google Slides Lessons Preview





Saskatchewan Math Curriculum Number Unit – Grade 6

3-Part Lesson Format

Part 1 – Minds On!

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



Learning Goal

We are learning to **identify the place value of digits in whole numbers** so we can read, write, and understand large numbers accurately.



Why Are We Learning This?

Imagine you're saving up for a new bike that costs \$1489. If you don't understand place value, you might think it's only \$148 and show up at the store with way too little money! Knowing place value helps you understand big numbers, so you can save, spend, and count your money like a pro!



Place Value - How Many...

Fill in the blanks with the missing number.

8 712 864

8 000 000 + _____ + 10 000 + _____ + 800 + 60 + 4

6 543 096

_____ + 500 000 + _____ + 3 000 + 000 + _____ + 6

7 108 664

7 000 000 + _____ + 00 000 + 8 000 + _____ + 60 + _____

Part 2 – Action!

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

Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!

Consolidation - Place Value

Den's number has:

- 9 thousands
- 6 millions
- Half as many ones as millions
- Triple the number of ten thousands than ones.
- 4 less hundreds than thousands.
- 6 tens.
- 2 more hundred thousands than tens.

What is his number?



Answer





Saskatchewan Math Curriculum

Number Unit – Grade 6

Place Value Using Decimals

What is the name of the place value for the underlined number?

#	Question	Place Value
1	2.689123	
2	3.514636	
3	5.127317	
4	<u>7</u> .365545	
5	9.438336	
6	4.73456 <u>1</u>	
7	5.217342	
8	8.621578	

Fill in the place value table for the numbers below

1) 3.265736

Ones	Decimal	Tenths	Hundredths	Thousandths	Ten Thousandths	Hun. Thousandths	Millionths

2) 6.412072

Ones	Decimal	Tenths	Hundredths	Thousandths	Ten Thousandths	Hun. Thousandths	Millionths

3) 8.724360

Ones	Decimal	Tenths	Hundredths	Thousandths	Ten Thousandths	Hun. Thousandths	Millionths

1 2 3 4 5 6 7 8
4, 8, 12, 16, 20, 24, 28, 32

3) 9×3	4) 5×8
5) 11×3	6) 15×5

$\div 3$	$\div 4$	$\div 6$
$3 \div 3 =$	$4 \div 4 =$	$6 \div 6 =$
$6 \div 3 =$	$8 \div 4 =$	$12 \div 6 =$
$9 \div 3 =$	$12 \div 4 =$	$18 \div 6 =$
$30 \div 3 =$	$44 \div 4 =$	$66 \div 6 =$
$33 \div 3 =$	$48 \div 4 =$	$72 \div 6 =$
$36 \div 3 =$	$52 \div 4 =$	$78 \div 6 =$
$39 \div 3 =$	$56 \div 4 =$	$84 \div 6 =$



Saskatchewan Math Curriculum

Number Unit – Grade 6

Prime Factor Trees

Fill in the factor trees below.

18: $18 \rightarrow 6 \times 3 \rightarrow 2 \times 3 \times 3$

54: $54 \rightarrow 6 \times \square \rightarrow 2 \times \square \times 3$

240: $240 \rightarrow 12 \times \square \rightarrow 2 \times \square \times \square \times 5$

Multiplication

Use the standard algorithm to solve the multiplication problems.

1)	2)	3)
$\begin{array}{r} 33 \\ \times 14 \\ \hline \end{array}$	$\begin{array}{r} 47 \\ \times 24 \\ \hline \end{array}$	$\begin{array}{r} 58 \\ \times 37 \\ \hline \end{array}$

Division: 3 by 1 – No Remainders

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

1)	2)	3)
$4 \overline{)232}$	$5 \overline{)310}$	$6 \overline{)444}$
4)	5)	6)
$7 \overline{)483}$	$9 \overline{)774}$	$8 \overline{)624}$



Grade 6

Strand: Number



	Curriculum Expectations	Pages
N6.1	Demonstrate understanding of place value including: • greater than one million • less than one thousandth with and without technology.	5-43
N6.2	Demonstrate understanding of factors and multiples (concretely, pictorially, and symbolically) including: • determining factors and multiples of numbers less than 100 • relating factors and multiples to multiplication and division • determining and relating prime and composite numbers.	82-105
N6.3	Demonstrate understanding of the order of operations on	107-111
N6.4		
N6.5		
N6.6	Demonstrate understanding of integers concretely, pictorially, and symbolically	182-202
N6.7	Extend understanding of fractions to improper fractions and mixed numbers.	205-225
N6.8	Demonstrate an understanding of ratio concretely, pictorially, and symbolically.	228-240
N6.9	Research and present how First Nations and Métis peoples, past and present, envision, represent, and use quantity in their lifestyles and worldviews.	243-246
TQ	Tests and quizzes	44-46, 151-154, 180-181, 203-204, 226-227, 241-242

Preview of 110 pages from this product that contains 479 pages total.

Place Value Chart

5 213 572 483											
Billions			Millions			Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
		5	2	1	3	5	7	2	4	8	3

Instruction

Fill in the place value charts below

1) 3 521 785 246									
Millions			Thousands			Ones			
Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	

2) 7 356									
Billions			Thousands				Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	

3) 9 237 031 35									
Billions			Millions			Thousands			Ones
Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Ones

4) 2 125 284 275											
Billions			Millions			Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones

5) 8 368 547 941											
Billions			Millions			Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones

Name: _____

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Curriculum Connection
N6.1

Place Value - Billions



Part 1

Circle the digit for each place value written

	Number	Digit
1)	245 842	Ten thousands place
2)	8 581 578	Millions place
3)	12 846 285	Thousands place
4)	1 299 542	Ten-millions place
5)	186 180 000	Hundred-millions place
6)	3 850 002	Hundred-thousands place
7)	5 879 652 008	One-thousands place
8)	3 896 748 223	Ten-billions place
9)	2 758 951 154	Hundreds place
10)	7 856 578 452	Ten-thousands place

Part 2

What place value is underlined?

	Number	Place Value
1)	8 545 121 848	
2)	3 565 215 835	
3)	3 455 458 489	
4)	9 753 602 574	
5)	5 410 848 496	

Name: _____

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Curriculum Connection
N6.1

Expanded Form



Questions

What is the expanded form of the numbers below?

1) 6 753 501 003

6 000 000 000 + 700 000 000 + 50 000 000 + 3 000 000 + 500 000 + 1 000 + 3

2) 2 851 460 000

3) 9 128 700 000

4) 108 318

5) 27 20

6) 5 104 705

7) 7 852 620 500

8) 4 870 008 985

9) 5 586 900 084

10) 7 842 000 541

PREVIEW

Name: _____

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Curriculum Connection
N6.1

Expanded Form

Questions

What is the standard form of the numbers below?

1) $5,000,000,000 + 800,000,000 + 40,000,000 + 100,000 + 20,000 + 3,000 + 400 + 50 + 6$

5,840,123,456

2) $2,000,000,000 + 100,000,000 + 7,000,000 + 800,000 + 10,000 + 200 + 30 + 5$

3) $9,000,000,000 + 50,000,000 + 600,000 + 70,000 + 8,000 + 900 + 10 + 2$

4) $6,000,000,000 + 9,000,000 + 6,000 + 500 + 40 + 3$

5) $3,000,000,000 + 700,000,000 + 10,000,000 + 20 + 30 + 6$

6) $4,000,000,000 + 500,000,000 + 80,000,000 + 900,000 + 70,000 + 6,000 + 30 + 2$

7) $7,000,000,000 + 100,000,000 + 20,000,000 + 400,000 + 50,000 + 6,000$

8) $1,000,000,000 + 200,000,000 + 30,000,000 + 400,000 + 50,000 + 6,000 + 700 + 80 + 9$

9) $8,000,000,000 + 300,000,000 + 10,000,000 + 500,000 + 900 + 20 + 6 + 500 + 30 + 5$

10) $5,000,000,000 + 20,000,000 + 300,000 + 5,000 + 7,000 + 800 + 90 + 4 + 3$

Task Cards: Place Value

Objective

What are we learning about?

Students will practice converting numbers from different representations, including expanded form, written form, and standard form.

Materials

What you will need for the activity.

- 24 task cards
- Student answer sheets for answers
- Pencil

1 2 3 4 5
6 7 8 9 0

Instructions

What you will do for the activity

1. Begin by explaining the importance of understanding how numbers are constructed in standard form.
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:

Eight billion, three hundred seventy-five million, four hundred twenty-eight thousand, one hundred three

a) 8,375,428,103

b) 8,357,428,103

c) 8,375,482,103

Card 5:

What is the expanded form of the number below?

7,204,015,690

a) $7,000,000,000 + 200,000,000 + 4,000,000 + 10,000 + 5,000 + 600 + 90$ b) $7,000,000,000 + 200,000,000 + 4,000,000 + 15,000 + 6,000 + 90$ c) $7,000,000,000 + 200,000,000 + 4,000,000 + 15,000 + 600 + 90$ **Card 6:**

One billion, five hundred sixty-three million, eight hundred twenty-nine thousand, seven hundred sixteen

a) 3,400,250,068

b) 3,400,250,068

c) 3,400,205,068

a) 1,563,829,761

b) 1,653,829,716

c) 1,563,829,716

Card 3:

9,302,174,258

a) $9,000,000,000 + 30,000,000 + 2,000,000 + 100,000 + 70,000 + 4,000 + 200 + 50 + 8$ b) $9,000,000,000 + 300,000,000 + 2,000,000 + 100,000 + 70,000 + 4,000 + 250 + 8$ c) $9,000,000,000 + 300,000,000 + 2,000,000 + 100,000 + 70,000 + 4,000 + 200 + 50 + 8$

Seven billion, one hundred ninety-eight million, three hundred fifty thousand, three hundred twenty

a) 7,198,650,321

b) 7,198,650,321

c) 7,189,650,321

Card 4:

$8,000,000,000 + 100,000,000 + 4,000,000 + 300,000 + 60,000 + 5,000 + 70 + 2$

a) 8,134,365,772

b) 8,104,365,072

c) 8,104,365,272

Card 8:

Two billion, four hundred fifty-six million, seven hundred eighty-nine thousand, one hundred two

a) 2,456,789,102

b) 2,456,879,102

c) 2,465,789,102

Task Cards

Cut out the task cards below

Card 9:

My number has 5 billion, 6 hundred million, 7 hundred forty thousand, 3 tens, and 5 ones.

- a) 5,600,704,305
- b) 5,600,740,035
- c) 5,600,740,305

Card 13:

My number has 4 billion, 5 hundred million, 3 hundred twenty-one thousands, 9 hundreds, 1 tens, and 8 ones.

- a) 4,000,500,321,918
- b) 4,500,321,918
- c) 4,000,500,321,908

Card 10:

Four billion, eight hundred sixty-seven million, five hundred twenty-three thousand, nine hundred forty-six.

- a) 4,867,523,946
- b) 4,867,523,946
- c) 4,876,523,914

Card 14:

Nine billion, four hundred seventy-six million, two hundred thirty-one thousand, eight hundred seventy-four.

- a) 9,476,231,874
- b) 9,476,231,784
- c) 9,467,231,874

Card 11:

6,209,314,875

- a) $6,000,000,000 + 200,000,000 + 9,000,000 + 300,000 + 10,000 + 4,000 + 800 + 70 + 5$
- b) $6,000,000,000 + 200,000,000 + 9,000,000 + 300,000 + 10,000 + 4,000 + 80 + 70 + 5$
- c) $6,000,000,000 + 200,000,000 + 9,000,000 + 300,000 + 14,000 + 8,000 + 75 + 5$

Card 15:

3,000,000,000 + 400,000,000 + 2,000,000 + 100,000 + 50,000 + 7,000 + 900 + 40 + 6

- a) $3,000,000,000 + 400,000,000 + 2,000,000 + 100,000 + 50,000 + 7,000 + 900 + 40 + 6$
- b) $3,000,000,000 + 400,000,000 + 2,000,000 + 100,000 + 50,000 + 7,000 + 900 + 40 + 6$
- c) $3,000,000,000 + 400,000,000 + 2,000,000 + 100,000 + 50,000 + 7,000 + 900 + 40 + 6$

Card 12:

Three billion, two hundred eighteen million, four hundred fifty-nine thousand, seven hundred sixty-eight

- a) 3,218,459,768
- b) 3,218,459,876
- c) 3,218,495,768

Card 16:

Five billion, six hundred thirty-two million, one hundred four thousand, two hundred fifty-six

- a) 5,632,014,256
- b) 5,632,104,256
- c) 5,623,104,256

Task Cards

Cut out the task cards below

Card 17:

My number has 7 billion, 8 hundred fifty million, 2 hundred ten thousand, 4 tens, and 9 ones.

- a) 7,850,210,409
- b) 7,800,210,409
- c) 7,850,210,049

Card 21:

Three billion, nine hundred seventy-two million, one hundred fifty-four thousand, six hundred eighty-one in standard form

- a) 3,972,154,618
- b) 3,972,514,681
- c) 3,972,154,681

Card 22:

$6,000,000,000 + 800,000,000 + 90,000,000 + 4,000,000 + 500,000 + 30,000 + 7,000 + 600 + 40 + 8$

- a) 6,849,537,648
- b) 6,894,537,684
- c) 6,894,537,648

Card 19:

4,706,289,154

- a) $4,000,000,000 + 700,000,000 + 6,000,000 + 200,000 + 80,000 + 9,000 + 100 + 50 + 4$
- b) $4,000,000,000 + 700,000,000 + 6,000,000 + 200,000 + 80,000 + 9,000 + 1,000 + 50 + 4$
- c) $4,000,000,000 + 700,000,000 + 6,000,000 + 200,000 + 80,000 + 9,000 + 10 + 50 + 4$

Card 23:

7,893,201

- a) $7,000,000 + 800,000 + 60,000 + 7,000 + 90,000 + 200 + 100 + 0 + 0 + 0$
- b) $4,000,000,000 + 500,000,000 + 60,000,000 + 7,000,000 + 90,000 + 30,000 + 200 + 100 + 0 + 0$
- c) $4,000,000,000 + 500,000,000 + 60,000,000 + 7,000,000 + 800,000 + 90,000 + 3,000 + 20 + 1$

Card 20:

Eight billion, one hundred thirty-two million, six hundred seventy-four thousand, one hundred eighty-five

- a) 8,132,674,158
- b) 8,132,674,185
- c) 8,132,764,185

Card 24:

My number has 4 billion, 9 hundred sixty million, 2 hundred thousand, 1 hundred, 4 tens, and 7 ones

- a) 4,960,200,174
- b) 4,960,200,147
- c) 4,960,020,147

Name: _____

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Curriculum Connection
N6.1

Task Cards: Place Value

Answers

Record your answers below

1	
2	
4	
5	
6	
7	
8	
9	
10	
11	
12	

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

Name: _____

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Curriculum Connection
N6.1

Place Value - Number Breakdown

Instructions

Fill in the blanks below

Number Breakdown

301 048 082

B	TM	M	H Th	T Th	Th	H	T	O

Write the expanded form of the number below

Fill in the pattern below

301 048 082, _____, _____, 301 048 085, 301 048 086

Fill in the pattern below

301 048 082, 301 049 082, _____, 301 050 082, _____

Fill in the pattern below

301 048 082, _____, 303 048 082, _____, 305 048 082

301 048 082	+10 000	
301 048 082	+1 000 000	
301 048 082	+ 100 000 000	
301 048 082	- 10 000 000	
301 048 082	- 1 000	

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, but we can still represent a quarter of a cookie by writing 0.25. 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

1	4	2	3	7	5	
Ones	Tenths	Hundredths	Thousandths	Ten Thousandths	Hun. Thousandths	Millionths

Part 1

Write the place value for the underlined number?

1) 8.1 <u>2</u> 4589	2) <u>2</u> 3.4567	3) 2. <u>4</u> 217	4) 3.648 <u>8</u> 2
5) 2.4 <u>3</u> 35	6) 4.74 <u>7</u> 823	7) <u>3</u> 261.5	8) 7.92 <u>6</u>
9) 2.5305 <u>2</u> 1	10) 7.754218	11) <u>1</u> 1.5423	12) 9.5381 <u>4</u> 2

Part 2

Fill in the place value table for the numbers below

1) 1.579238							
Ones	Decimal	Tenths	Hundredths	Thousandths	Ten Thousandths	Hun. Thousandths	Millionths

2) 2.387219							
Ones	Decimal	Tenths	Hundredths	Thousandths	Ten Thousandths	Hun. Thousandths	Millionths

Exit Cards

Cut Out

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

Name: _____

Answer the word problems below.

1) Emma's ribbon is 9.234 meters long. How long is her ribbon to the nearest hundredth?

2) Sarah's water bottle holds 0.856 liters of water. How much water does it hold to the nearest hundredth?

Name: _____

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Ordering Decimals

**Instructions**

Order the decimal numbers using the letters

1) Order the following numbers from least to greatest:

a) 0.1234

b) 0.0012

c) 0.123

d) 0.1236

Answer (ex. a, b, c, d)

2) Order the following numbers from greatest to least:

a) 45.6789

b) 45.789

c) 45.67

d) 45.8901

Answer (ex. a, b, c, d)

3) Order the following numbers from least to greatest:

a) 987.654321

b) 98.7654321

c) 9876.54321

d) 9.87654321

Answer (ex. a, b, c, d)

4) Order the following numbers from greatest to least:

a) 0.000123

b) 0.00123

c) 0.0123

d) 0.123

Answer (ex. a, b, c, d)

Activity: Decimal Treasure Hunt

Objective

What are we learning about?

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

Materials

What you will need for the activity.

- 24 index cards or pieces of paper
- Markers or pens
- Tape
- Timer (optional)
- Small prizes (optional)



Instructions

How you will complete it

1. Write a set of decimal numbers on 24 index cards. Each card should have one decimal number (or use the cards we have provided).
2. Tape the cards in various locations around the classroom. Ensure the numbers are visible but not too easy to find.
3. Explain to the students that they will be going on a treasure hunt for the decimal number cards. They should not move the cards when they find them; instead, they should write the numbers on the top part of their page.
4. Once all the cards are found and recorded, students must write the numbers in order from least to greatest on the bottom part of their page.
5. Allow students to move around the room individually to find the numbers.
6. Set a timer to add excitement and challenge (optional).
7. After the hunt, gather the students and discuss the correct order of the decimal numbers. Award small prizes to students who correctly ordered their numbers (optional).

Name: _____

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Curriculum Connection
N6.1

Index Cards

Cut out the index cards below

28.5142

28.642

28.5142

28.542

0.2758

0.2

0.275

0.258

PREVIEW

Name: _____

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Curriculum Connection
N6.1

Index Cards

Cut out the index cards below

456.7859

456.7889

456.7859

9.10002

9.110002

9.10002

0.905760

0.915760

PREVIEW

Name: _____

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Curriculum Connection
N6.1

Index Cards

Cut out the index cards below

0.902760

34.545878

0.100578

34.539978

0.807209

34.50278

0.897209

0.810209

Recording Sheet

Follow the instructions below

1) When you find a decimal number, write it in the box below.

2) Once you've found all 24 numbers, write them in order from least to greatest.

1)		
2)		
3)		15)
4)		16)
5)		17)
6)		18)
7)		19)
8)		20)
9)		21)
10)		22)
11)		23)
12)		24)

Comparing Decimals

Part 1Compare the decimal numbers using $>$, $<$, and $=$

1)

0.012345

0.12345

2)

0.00009

0.0001

3)

12.3456

12.3456

4)

98.765432

98.765431

5)

0.0678

0.0678

6)

9.8765

9.8765

7)

123.45678

123.45679

8)

0.000459

0.000459

Part 2

Answer the questions below

- 1) A company has two suppliers who offer discounts on bulk purchases. Supplier A offers a discount of 5.6789% and Supplier B offers a discount of 5.689%. Which supplier offers a greater discount?
- 2) A construction company is building a bridge that needs 1,234.5678 cubic meters of concrete. Two suppliers offer different prices for the concrete. Supplier A offers a price of \$89.1234 per cubic meter, while Supplier B offers a price of \$89.175 per cubic meter. Which supplier offers a lower price for the required amount of concrete?



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

1) Two students scored close marks in a test. Student A scored 87.456 points, and Student B scored 87.654 points. Who scored higher?

2) A grocery store sells apples at two different prices. Store A sells them for \$1.234 per pound, and Store B sells them for \$1.235 per pound. Which store sells apples at a lower price?

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Name: _____

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Curriculum Connection
TQ

Place Value Quiz

Part 1

Fill in the place value charts below

5 231 363 635									
B	HM	TM	M	H Th	T Th	Th	H	T	O

Part 2

Which place value is the underlined number?

1) 452 132 <u>5</u> 18	2) 1 654 32 <u>6</u> 68	3) 458 342 658
4) 153 514 248	5) 1 654 32 <u>6</u> 68	6) 1 412 762 134
7) 3 150 427 <u>2</u> 05	8) 7 852 <u>6</u> 20 500	9) 7 842 3541

Part 3

Fill in the below – how many are in the number?

	Number	Billions	Millions	Thousands	Ones
1)	5 218 245 842				
2)	7 610 304 220				
3)	3 497 584 752				

Part 4

Write the standard form of the numbers below?

1) $2\,000\,000\,000 + 100\,000\,000 + 7\,000\,000 + 800\,000 + 10\,000 + 200 + 30 + 5$ 2) $4\,000\,000\,000 + 500\,000\,000 + 80\,000\,000 + 900\,000 + 70\,000 + 6\,000 + 500 + 30 + 2$

Part 5

Write the expanded form of the numbers below?

1) 2 850 000 000

2) 9 128 700 000

Part 6

Write the standard form of the numbers below?

1) Six-hundred four million, three hundred seventy-six thousand, two hundred twenty-two

2) Nine hundred forty million, two thousand, six hundred and fifty

Part 7

Write the written form of the numbers below

1) 87 300 640

2) 500 160 500

3) 352 007 004

Part 8

Write the standard form of the numbers below

1) 728.1252	2) 63.4212	3) 4 352.4127	4) 13.61288
5) 2.472	6) 1.73213	7) 24.32646	8) 7.925236

Part 9

Compare the numbers using $>$, $<$, and $=$

1)	0.012345		0.12345		0.0001		
3)	123.456		12.3456	4)	98.76543		431

Part 10

Order the decimal number using the letters

Order the following numbers from least to greatest:

- a) 2.5234
- b) 2.1012
- c) 2.02345
- d) 2.523456

Answer (ex. a, b, c, d)

Name: _____

49

Curriculum Connection
N6.3

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

9×2

6×4

7×5

4×3

9×6

8×2

8×7

9×9

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

$$\begin{array}{ccc} & 14 \times 4 & \\ \text{Option 1: } 28 \times 2 & \text{or} & \text{Option 2: } 7 \times 8 \\ \downarrow & & \downarrow \\ 56 & & 56 \end{array}$$



PREVIEW

14×4

16×6

18×6

18×4

20×8

16×4

14×8

18×5

19×3

17×4

Exit Cards

Cut Out

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

Name: _____

Multiplication – Doubling and Halving

1) 13×10

2) 18×6

Name: _____

Multiplication – Doubling and Halving

1) 13×10

2) 18×6

Name: _____

Multiplication – Doubling and Halving

1) 13×10

2) 18×6

Name: _____

Multiplication – Doubling and Halving

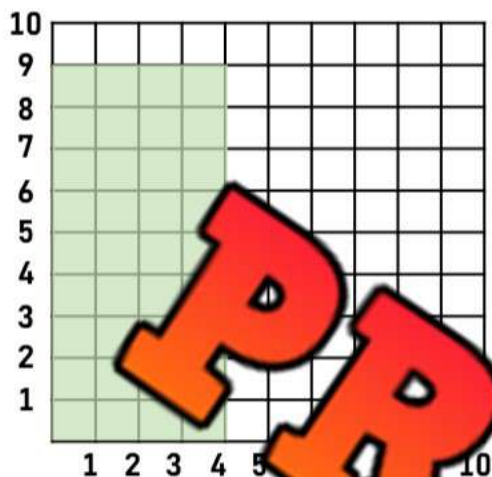
1) 13×10

2) 18×6

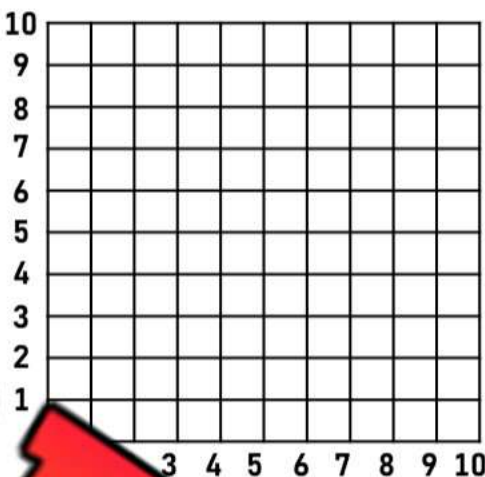
Division - Arrays

Instructions

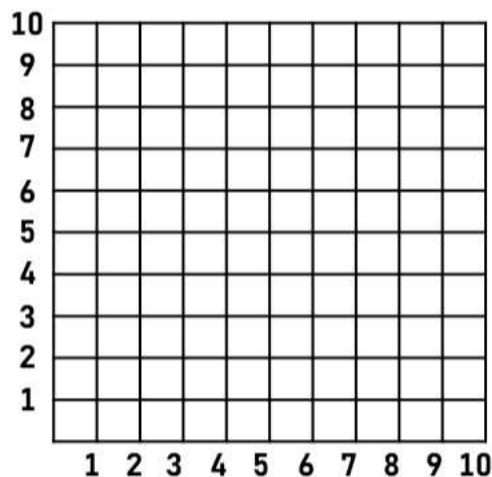
Shade in the arrays using the table. Answer the questions below



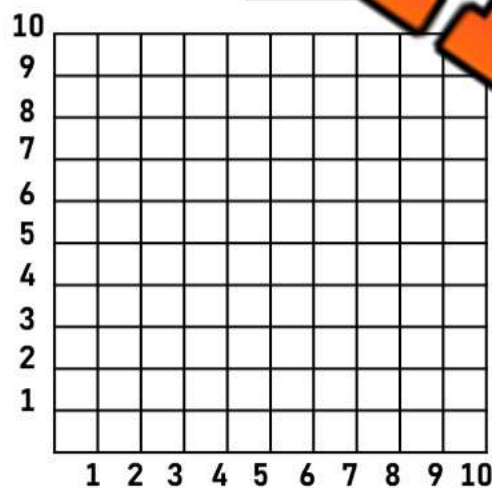
$36 \div 4 = \underline{\hspace{2cm}}$



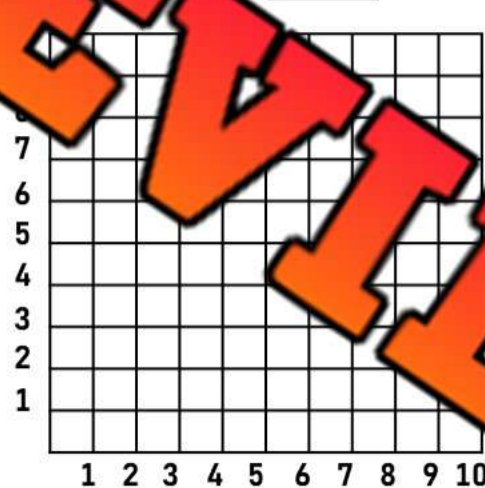
$57 \div 7 = \underline{\hspace{2cm}}$



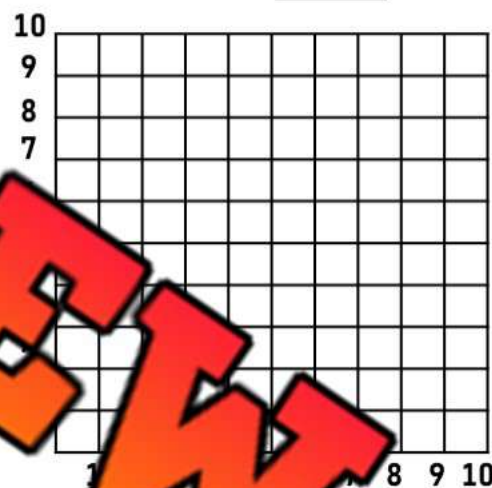
$54 \div 6 = \underline{\hspace{2cm}}$



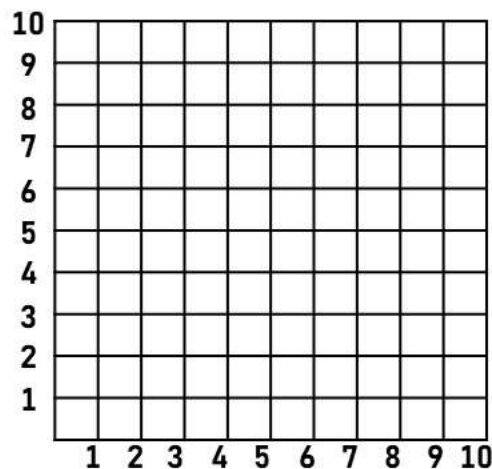
$48 \div 8 = \underline{\hspace{2cm}}$



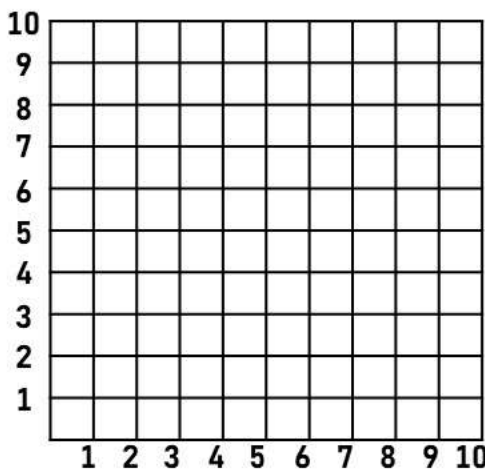
$90 \div 10 = \underline{\hspace{2cm}}$



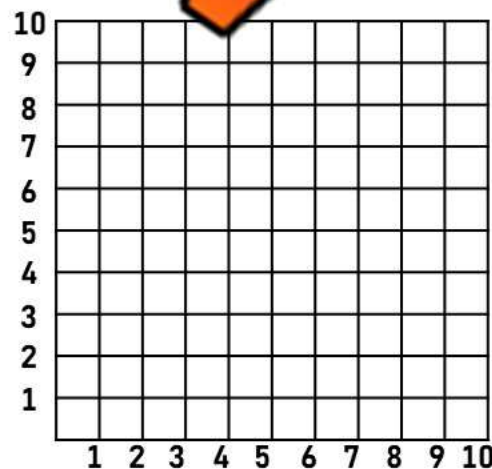
$28 \div 7 = \underline{\hspace{2cm}}$



$18 \div 3 = \underline{\hspace{2cm}}$



$81 \div 9 = \underline{\hspace{2cm}}$



$40 \div 5 = \underline{\hspace{2cm}}$

Activity: Multiplication and Division Race

Objective

What are we learning about?

Students will solve multiplication and division questions quickly and accurately in a race with their classmates.

Material

What you will need for the activity.

- Index cards
- Markers or pens
- Timer (optional)



Instructions

How you will complete the activity

1. Prepare a stack of index cards with multiplication and division questions.
2. Have students line up in a single file (or you can have students sit at their desk).
3. Call the first two students in line to the front. Explain that they will answer the multiplication/division question that the teacher pulls from the stack.
4. Pull a card from the stack and read the question aloud. The first student to answer correctly wins the round.
5. The student who answers correctly stays at the front to compete against the next student in line. The student who loses goes to the end of the line.
6. Optional: If a student wins five rounds in a row, they move to the back of the line to give others a chance to play.
7. Continue the game until all students have had a chance to compete multiple times or until the designated game time is up.

Name: _____

66

Curriculum Connection
N6.3

Math Cards

Cut out the math cards below

$$2 \times 150$$

300

$$140 \div 2$$

70

$$5 \times 40$$

$$500 \div 5$$

100

$$10 \times 100$$

1000

$$700 \div 10$$

$$2 \times 175$$

350

$$360 \div 2$$

180

$$5 \times 180$$

900

$$1000 \div 5$$

200

PREVIEW

Name: _____

67

Curriculum Connection
N6.3

Math Cards

Cut out the math cards below

$$10 \times 120$$

1200

$$900 \div 10$$

90

$$2 \times 10$$

$$480 \div 2$$

240

$$5 \times 220$$

1100

$$600 \div 5$$

120

$$10 \times 140$$

1400

$$800 \div 10$$

80

$$2 \times 250$$

500

$$720 \div 2$$

360

PREVIEW

Name: _____

70

Curriculum Connection
N6.3

Math Cards

Cut out the math cards below

$$5 \times 320$$

1600

$$100 \div 5$$

20

$$420 \div 10$$

42

$$2 \times 550$$

1100

$$100 \div 2$$

50

$$5 \times 350$$

1750

$$600 \div 5$$

120

$$10 \times 280$$

2800

$$850 \div 10$$

85

PREVIEW

Name: _____

71

Curriculum Connection
N6.3

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

PREVIEW

39

$85 \div 5$

$72 \div 4$

$84 \div 6$

$105 \div 5$

1

$112 \div 8$

$114 \div 6$

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

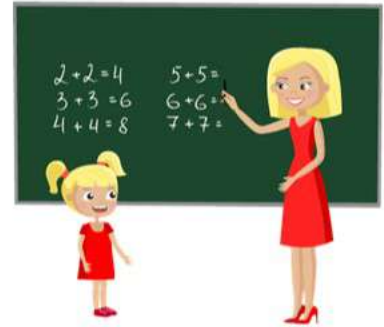
144 ÷ 6 = 24

60 ÷ 6 = 10

60 ÷ 6 = 10

24 ÷ 6 = 4

10 + 10 + 4 = 24



72

68 ÷ 4

150 ÷ 6

120 ÷ 4

208 ÷ 8

189 ÷ 7

198 ÷ 6

Exit Cards

Cut Out

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

Name: _____

Division – Splitting Up The Dividend

1) $105 \div 5$

2) $225 \div 9$

Name: _____

Division – Splitting Up The Dividend

1) $105 \div 5$

2) $225 \div 9$

Name: _____

Division – Splitting Up The Dividend

1) $105 \div 5$

2) $225 \div 9$

Name: _____

Division – Splitting Up The Dividend

1) $105 \div 5$

2) $225 \div 9$

Mixed Operations - BEDMAS

When solving an equation, you need to follow the order of operations. This means you have to solve the equation in the correct order, not just from left to right. Using BEDMAS helps us remember the order to solve.

1. Brackets
2. Exponents
3. Division or Multiplication (whichever is first)
4. Addition or Subtraction (whichever is first)

Example 2

$$9 - 3 \div (3 \times 1) = ?$$

$$9 - 3 \div 3 =$$

$$9 - 1 = 8$$

Instructions

Calculate the answer to the equations using BEDMAS

1) $3 + (4 \times 5) =$

2) $11 -$

3) $(8 \times 4) + (4 \div 2) =$

4) $(12 \div 6) \times 3 =$

5) $12 + (2 + 10) =$

6) $8 \div$

7) $24 \div 6 + (4 + 10) =$

8) $17 - 2 \times 5 =$

9) $25 + (5 \times 5) =$

10) $25 - 15 \div 5 =$

11) $22 - 6 + 5 =$

12) $18 - 5 + (6 \times 8) =$

Mixed Operations - BEDMAS

Instructions

Find out the value of the variables using BEDMAS

1) $1 \times (2 + 8) =$

2) $3 \times (6 - 4) =$

3) $8 \times 4 + (13 + 8) =$

4) $(7 + 5) \times 3 =$

5) $9 - 4 + (4 \times 9) =$

6) $5 \times (4 + 5) =$

7) $36 \div (3 + 3) =$

8) $12 \times 3 - 8 =$

9) $28 + (9 \div 3) =$

10) $2 \times (28 \div 7) =$

11) $42 + (3 \times 4 \times 2) =$

12) $45 \div 9 \times (2 + 1) =$

Word Problems

Answer the word problems below

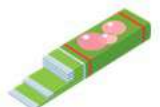
1) Lindsay ordered two slices of pizza and soda for lunch. A slice of pizza is \$2.50, and a soda is \$2.00. Lindsay did the math below. What did she do wrong?

$$\$2.50 + \$2.00 \times 2 = ?$$

$$\$4.50 \times 2 = \$9.00$$



2) John bought 2 pieces of bubble gum for 20 cents each and 3 chocolate bars for 70 cents each. How many cents did he spend? Write the equation.



Order of Operations – Who's Right?

Questions

Sophia and Aiden both answered the questions below. Circle who's right

	Question	Sophia's Answer	Aiden's Answer
1	$2 + 6 \times 4 + 12$	44	38
2	$12 \div 3 \times 3$	4	24
3	$12 \div (2 + 3)$	0	18
4	$5 \times 3 + 8 \div 2$	19	11
5	$12 \div 3 \times (5 + 5)$	25	40
6	$20 + (8 - 3) \times 2$	30	
7	$10 \times 3 - (2 \times 5) - 2$	22	18
8	$25 \div 5 + 6 \times 3$	23	33
9	$48 \div 6 - (2 + 3)$	48	3
10	$3 + 6 \times 7 + 11 - 6 \div 2$	53	34

Order of Operations – Candy Shop

Word Problems

Write the equation for the situations below and answer the question

A candy shop sells gum, gummies, and candies. The prices are displayed in the table below.

Candy	Price in Cents
Gum	25
Gummies	5
Candies	10

**Example**

Miranda bought 2 pieces of gum, 10 gummies, and 5 candies. How many cents did she spend?

Ans. $(2 \times 25) + (10 \times 5) + (5 \times 10) =$
 $50 + 50 + 50 = 150$

- 1) Ava bought 3 pieces of gum, 8 gummies, and 1 candy. How many cents did she spend?
- 2) Neil had 100 cents. He bought 5 gummies and 6 candies. How many cents does he have left?
- 3) Dan purchased 4 pieces of gum, 9 gummies, and 3 candies. How many cents did he spend?
- 4) Claire had 150 cents. She bought 3 pieces of gum, 3 candies, and 6 gummies. How much does she have left?

Name: _____

84

Curriculum Connection
N6.2

Composing a Product in Multiple Ways

Instructions

How many ways can you represent a product?. The first one is done for you

1)	Product	60
$1 \times 3 \times 20$ $2 \times 10 \times 3$ $3 \times 4 \times 5$		

2)	Product	40

3)	Product	

	Product	30

5)	Product	120

6)	Product	200

Introduction to Multiples

Instructions

List the first 5 multiples for each number



Example	
2	2, 4, 6, 8, 10

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

Name: _____

87

Curriculum Connection
N6.2

Introduction to Factors

Instructions

List all of the factors for the numbers below

1) 12 _____, _____, _____, _____, _____, _____

2) _____, _____

3) 21 _____, _____

4) 16 _____, _____, _____

5) 43 _____, _____

6) 29 _____, _____

7) 6 _____, _____, _____, _____

8) 10 _____, _____, _____, _____

9) 15 _____, _____, _____, _____

10) 20 _____, _____, _____, _____, _____, _____

PREVIEW



Prime or Composite Number?

Instructions

1) Write the factors 2) Is the number a prime or composite number?

1) 27

Factors: _____

Prime or Composite

2) 12

Factors: _____

Prime or Composite

3) 7

Factors: _____

Prime or Composite

4) 17

Factors: _____

Prime or Composite

5) 28

Factors: _____

Prime or Composite

6) 41

Factors: _____

Prime or Composite

7) 33

Factors: _____

Prime or Composite

8) 35

Factors: _____

Prime or Composite

9) 73

Factors: _____

Prime or Composite

10) 81

Factors: _____

Prime or Composite

Finding Prime and Composite Numbers

Part 1

Follow the directions below



1) Circle the prime numbers below

11 15 7 18 3 5

13 19 33 49 52 45

67 90 81 74

2) Circle the composite numbers below

6 12 20 13 19 25

50 43 41 4 55 21

47 54 62 63

Part 2

Write the numbers from the pair under the correct heading

	Pairs of Numbers	Prime	Composite
1)	22, 5		
2)	12, 17		
3)	23, 25		
4)	41, 49		
5)	59, 52		
6)	67, 16		
7)	73, 81		
8)	89, 95		

Prime vs Composite Numbers

Instructions

Colour prime numbers one colour and composite numbers a different colour



Type of Number	Colour
Composite Number	
Prime Number	



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

Name: _____

93

Curriculum Connection
N6.2

Composite Number Maze

Instructions

Help Angela get to school by colouring a composite number path



PREVIEW

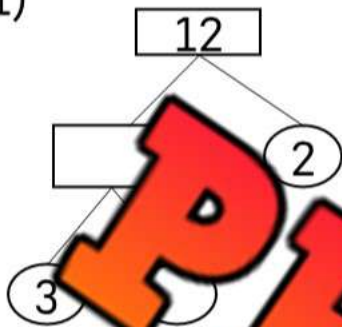
7	19	29	37	67	71	61	83		
97	51	32	45	46	25	10			
79	92	1	29	97	83	53	43	13	
5	50	76	9	7	5	2	11	5	
3	7	41	23	7	29	11	41	6	7
74	55	52	92	95	13	67	13	17	
98	17	61	41	89	23	59	71	59	
100	70	39	40	68	65	79	83	29	89
2	19	83	67				61	59	73
11	59	73	59				53	67	61

Prime Factor Trees

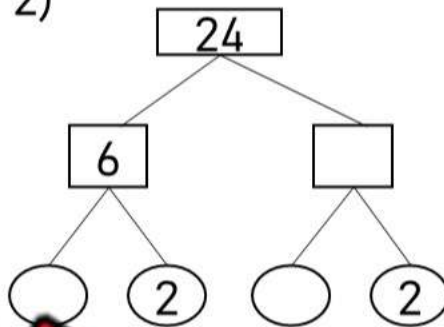
Instructions

Fill in the factor trees below

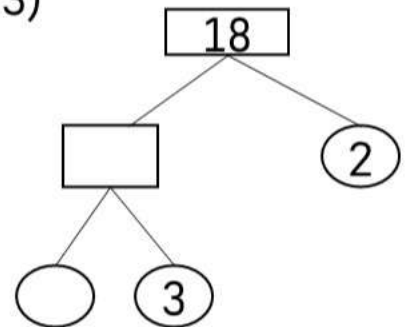
1)



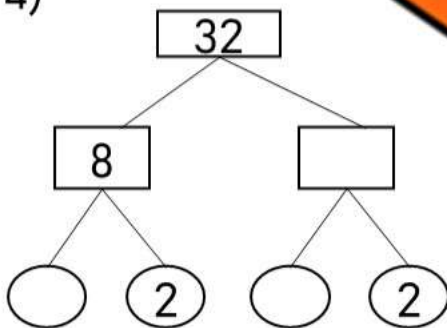
2)



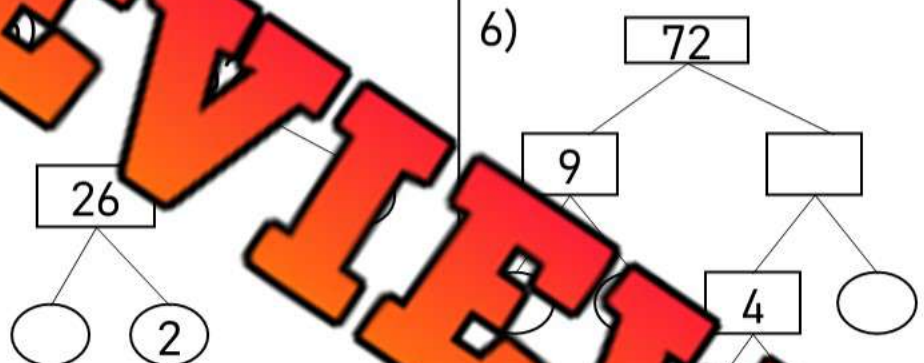
3)



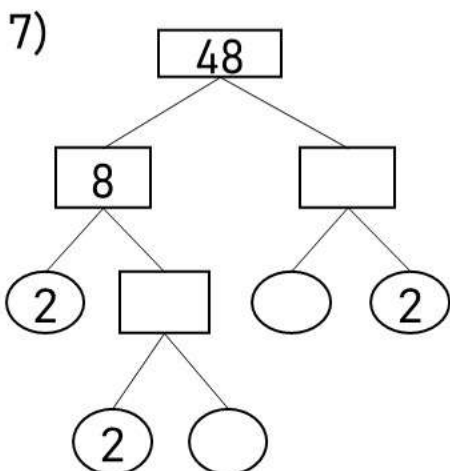
4)



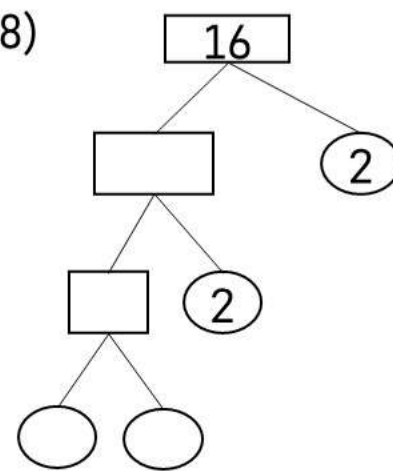
6)



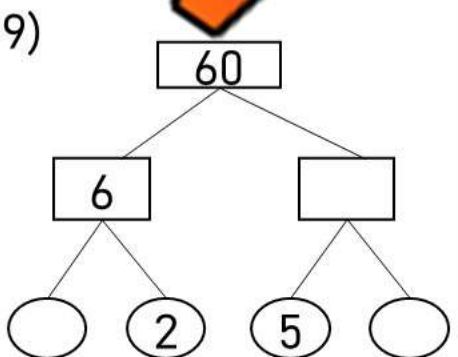
7)



8)



9)

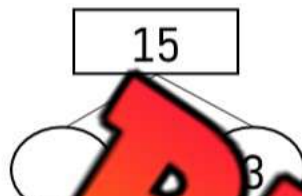


Prime Factor Trees

Instructions

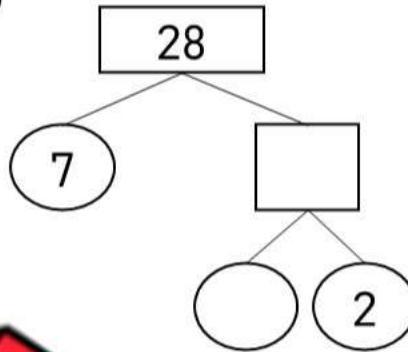
Fill in the factor trees below

1)

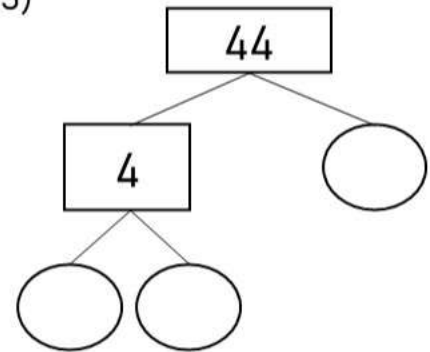


$$15 = _ \times _ \times _ \times _$$

2)

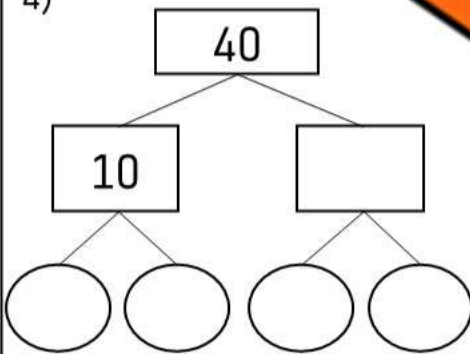


3)



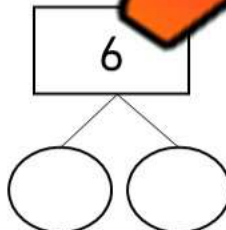
$$44 = _ \times _ \times _$$

4)



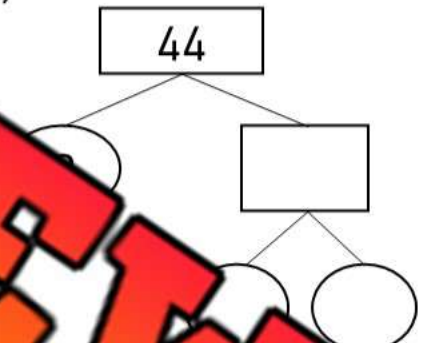
$$40 = _ \times _ \times _ \times _$$

5)



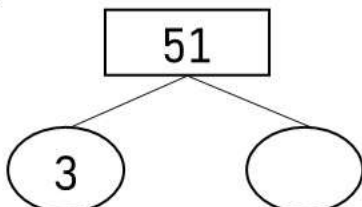
$$49 = _ \times _ \times _$$

6)



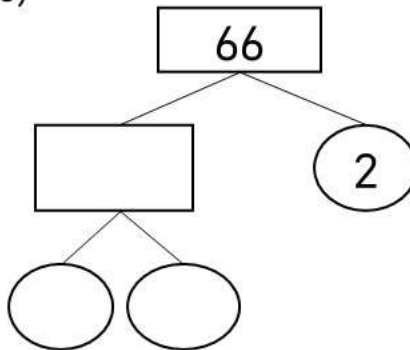
$$44 = _ \times _ \times _$$

7)



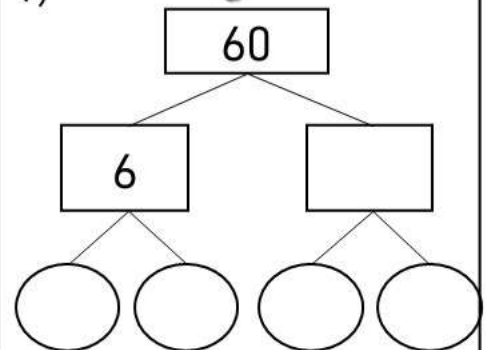
$$51 = _ \times _$$

8)



$$66 = _ \times _ \times _$$

9)



$$60 = _ \times _ \times _ \times _$$

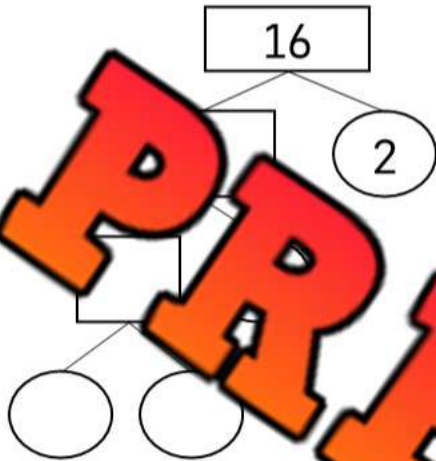
Prime Factor Trees

Instructions

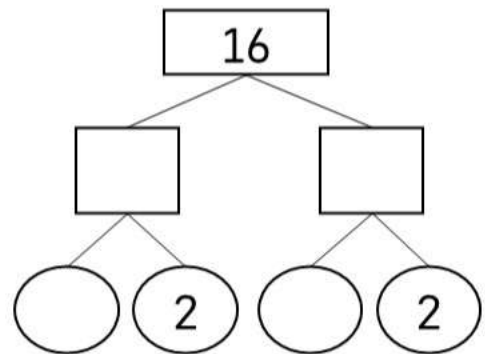
Fill in the factor trees differently for the same number



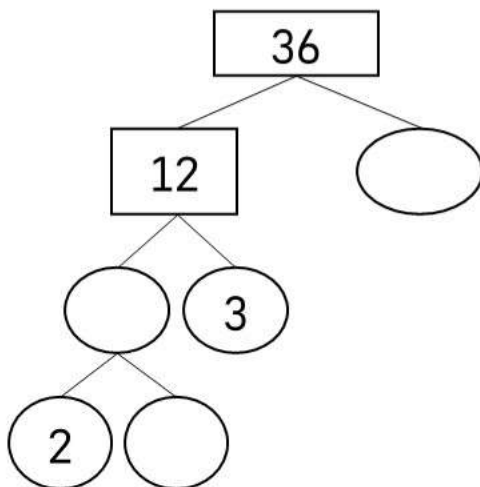
1)

**Equation**

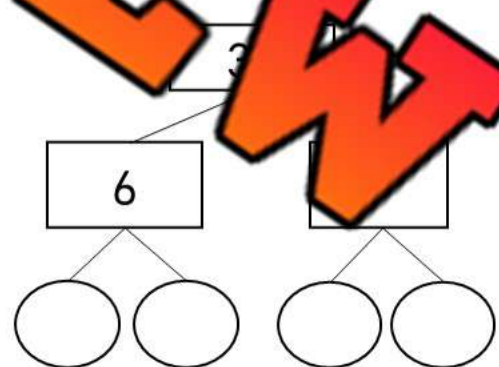
2)

**Equation**

3)

**Equation**

4)

**Equation**

Name: _____

100

Curriculum Connection
N6.2

Greatest Common Factor

Instructions

List the factors and write the greatest common factor (GCF)

1)

12 _____

18 _____

GCF =

2)

15 _____

25 _____

GCF =

3)

35 _____

28 _____

GCF =

4)

16 _____

4 _____

GCF =

5)

32 _____

48 _____

GCF =

6)

24 _____

16 _____

GCF =

7)

16 _____

48 _____

GCF =

8)

27 _____

9 _____

GCF =

9)

54 _____

36 _____

GCF =

10)

64 _____

56 _____

GCF =

Greatest Common Factor - Riddle

Questions

Find the GCF and match the letter to the numbers above. Notice there are 2 O's, T's and S's! You'll need to decide where to place the letter.

The more you take, the more you leave behind. What am I?

4		12	24	3	15	25	5	

S (15, 24)	(48, 56)	P (50, 75)
T (48, 36)	F (16, 28)	U (14, 21)
S (48, 72)	T (9, 15)	E (60, 45)

Lowest Common Multiple (LCM)

The lowest common multiple (LCM) is simply the smallest of the common multiples.

Steps:

- 1) List all the multiples of the set of numbers until you get a match
- 2) The LCM is the lowest number that fits into all numbers in the set

Example

(3, 10) =

3 – 3, 6, 9, 12, 15, 18, 21, 24, 27, (30), ...

10 – 10, 20, 30, ...

Answer – The LCM is 30

Instructions

Find the lowest common multiple (LCM) of the numbers below

1) (4, 10)

2) (3, 8)

3) (2, 5)

4) (6, 8)

5) (5, 6)

6) (8, 12)

7) (9, 4)

8) (9, 6)

9) (10, 6)

Lowest Common Multiple - Riddle

Instructions

Write the letters above the answers at the bottom to solve the riddle

U

LCM of 3 and 4

R

LCM of 9 and 21

I

LCM of 5 and 3

Y

LCM of 7 and 6

O

LCM of 4 and 10

J

LCM of 4 and 14

N

LCM of 6 and 8

A

LCM of

What belongs to you but is used more by your friends

42

20

12

63

24

18

21

28

Front-End Estimation

Front-end estimation is when we keep the first number the same and change the other numbers to 0. This form of estimation always underestimates the number.

Examples 1) $37 \rightarrow 30$ 2) $164 \rightarrow 100$ 3) $2.35 \rightarrow 2.00$ 4) $26.5624 \rightarrow 26.0000$

Part 1 Use front-end estimation to round the 3-digit numbers below

1) 324		6) 212	
2)		7) 363	
3) 438		8) 745	
4) 614		9) 913	
5) 962		10) 867	

Part 2 Use front-end estimation to round the 4-digit numbers below

1) 4375		6) 1067	
2) 7265		7) 3271	
3) 8485		8) 4087	
4) 6214		9) 9582	
5) 1971		10) 8485	

Part 3 Use front-end estimation to round to the nearest whole number

1) 4.27		6) 17.9312	
2) 7.1		7) 13.57284	
3) 8.285		8) 24.13214	
4) 6.078		9) 39.64825	
5) 1.512		10) 48.73126	

Front-End Estimation – Multiple Choice

Questions

Which estimate is the best? Use front-end estimation to make your choice

1) 8.34×7 a) 48 b) 56 c) 70 d) 55	2) 5.52×5 a) 30 b) 55 c) 25 d) 32
3) 6.72×8 a) 48 b) 50 c) 52 d) 55	4) 4.25×3 a) 11 b) 15 c) 12 d) 13
5) 7.64×7 a) 49 b) 52 c) 59 d) 45	6) 10.1×8 a) 80 b) 78 c) 80 d) 78
7) 11.37×4 a) 48 b) 44 c) 52 d) 40	8) 24.54×4 a) 99 b) 96 c) 100 d) 90
9) 12.84×2 a) 24 b) 28 c) 30 d) 20	10) 21.34×3 a) 50 b) 60 c) 68 d) 63

Multiplying Decimals – Placing The Decimal

Instructions

Use front-end estimation to determine where to put the decimal

1) 7.334×7 a) 513.38 b) 51.338 c) 5.1338 d) 512.38	2) 3.152×5 a) 157.6 b) 1.576 c) 15.76 d) 0.1576
3) 6.742×8 a) 53.936 b) 5.3936 c) 539.36 d) 5393.6	4) 5.31×3 a) 159.3 b) 1593.0 c) 1.593 d) 15.93
5) 9.422×7 a) 65.954 b) 6.5954 c) 659.54 d) 6595.4	6) 6.32×8 a) 50.592 b) 5.0592 c) 505.92 d) 5059.2
7) 9.325×4 a) 37.3 b) 3.73 c) 0.373 d) 373.0	8) 4.627×4 a) 185.08 b) 18.508 c) 1850.8 d) 1.8508
9) 11.624×2 a) 232.48 b) 23.248 c) 2.3248 d) 2324.8	10) 10.334×3 a) 310.02 b) 3.1002 c) 3100.2 d) 31.002

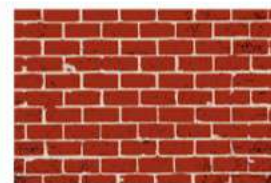
Front-End Estimation – Multiplication Using Decimals**Questions**

Use front-end estimation to estimate the answers

1) Jen earns \$22.53 each time she washes a car. She washed 6 cars today. Approximately how much money did she earn?



2) Ben has 9 bricks in his driveway. Each brick is 12.23cm long. Approximately how long are all the bricks if he puts them together?



3) Steve ran a route around his neighborhood for 7 days straight. His route is 11.25km. Approximately how many kilometers did Steve run in the 7 days?



4) Julia worked 7 hours yesterday and made \$18.55 per hour. How much money did she earn yesterday?



5) Henry bought 4 bags of soil. Each bag weighs 18.75kg. Approximately how much did all the bags weigh in total?



Multiplication - 2 x 1 Digits

Questions

Use the standard algorithm to solve the multiplication problems below

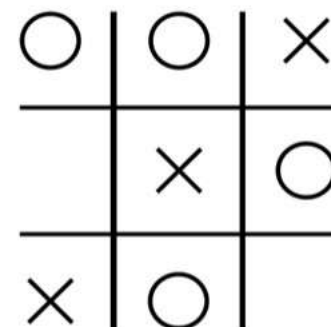
1) $\begin{array}{r} 36 \\ \times 4 \\ \hline \end{array}$	2) $\begin{array}{r} 41 \\ \times 3 \\ \hline \end{array}$	3) $\begin{array}{r} 50 \\ \times 6 \\ \hline \end{array}$	4) $\begin{array}{r} 47 \\ \times 5 \\ \hline \end{array}$	5) $\begin{array}{r} 85 \\ \times 0 \\ \hline \end{array}$
6) $\begin{array}{r} 61 \\ \times 4 \\ \hline \end{array}$	7) $\begin{array}{r} 34 \\ \times 5 \\ \hline \end{array}$	8) $\begin{array}{r} 46 \\ \times 5 \\ \hline \end{array}$	9) $\begin{array}{r} 31 \\ \times 9 \\ \hline \end{array}$	10) $\begin{array}{r} 24 \\ \times 8 \\ \hline \end{array}$
11) $\begin{array}{r} 86 \\ \times 7 \\ \hline \end{array}$	12) $\begin{array}{r} 90 \\ \times 2 \\ \hline \end{array}$	13) $\begin{array}{r} 67 \\ \times 4 \\ \hline \end{array}$	14) $\begin{array}{r} 56 \\ \times 3 \\ \hline \end{array}$	15) $\begin{array}{r} 89 \\ \times 3 \\ \hline \end{array}$
16) $\begin{array}{r} 63 \\ \times 1 \\ \hline \end{array}$	17) $\begin{array}{r} 24 \\ \times 0 \\ \hline \end{array}$	18) $\begin{array}{r} 32 \\ \times 8 \\ \hline \end{array}$	19) $\begin{array}{r} 47 \\ \times 7 \\ \hline \end{array}$	20) $\begin{array}{r} 54 \\ \times 6 \\ \hline \end{array}$
21) $\begin{array}{r} 41 \\ \times 2 \\ \hline \end{array}$	22) $\begin{array}{r} 63 \\ \times 4 \\ \hline \end{array}$	23) $\begin{array}{r} 86 \\ \times 8 \\ \hline \end{array}$	24) $\begin{array}{r} 97 \\ \times 4 \\ \hline \end{array}$	25) $\begin{array}{r} 81 \\ \times 2 \\ \hline \end{array}$

Math Tic-Tac-Toe: 2 x 1 Digit Multiplication

Objective

What are we learning about?

To help students practice solving 2 x 1-digit multiplication problems in a fun and interactive way through a Tic-Tac-Toe game.



Materials

What you will need for the activity.

- Whiteboard or paper
- Markers or X and O markers
- Math Tic-Tac-Toe grid template (to be drawn on the whiteboard or printed on paper)

Instructions

How you will complete the activity.

1. Find a partner to play the game with.
2. The goal is to solve 2 x 1 digit multiplication problems and place your marker (X or O).
3. One player will be "X" and the other will be "O".
4. Take turns choosing a square and solving the problem in that square.
5. Write down the solution below the equation and place your marker (X or O) in the square.
6. If a player chooses a square and solves the equation incorrectly, they do not get to place their marker in that square. The other player gets a chance to solve it correctly and place their marker.
7. The first player to get three markers in a row (horizontally, vertically, and diagonally) wins the game. Continue playing with different tic-tac-toe grids on the sheet.

Tic-Tac-Toe

Use the following tic-tac-toe grids for the game.

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

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

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

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

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

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

Name: _____

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Curriculum Connection
N6.4

Multiplication – 2 x 2 Digits

Questions

Use the standard algorithm to solve the multiplication problems below

	1)		
		6	1
	x		

	2)		
		7	2
	x	1	4

	3)		
		4	3
	x	7	1

	4)		
		2	6
	x	2	8

	5)		
		6	1
	x	3	7

	6)		
		6	
	x	2	3

		6	2
	x		

	8)		
		9	8
	x	6	2

	9)		
		8	3
	x	4	6

	10)		
		2	9
	x	3	7

	11)		
		3	5
	x	8	2

	12)		
		3	3
	x	7	2

Multiplication – 2 x 2 Digits

Part 1

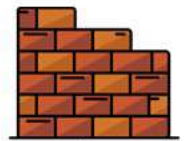
Use the standard algorithm to solve the multiplication problems below

1) $\begin{array}{r} 63 \\ \times 42 \\ \hline \end{array}$	2) $\begin{array}{r} 35 \\ \times 73 \\ \hline \end{array}$	3) $\begin{array}{r} 55 \\ \times 10 \\ \hline \end{array}$	4) $\begin{array}{r} 29 \\ \times 65 \\ \hline \end{array}$	5) $\begin{array}{r} 68 \\ \times 40 \\ \hline \end{array}$
6) $\begin{array}{r} 38 \\ \times 74 \\ \hline \end{array}$	7) $\begin{array}{r} 56 \\ \times 74 \\ \hline \end{array}$	8) $\begin{array}{r} 26 \\ \times 64 \\ \hline \end{array}$	9) $\begin{array}{r} 88 \\ \times 23 \\ \hline \end{array}$	10) $\begin{array}{r} 25 \\ \times 41 \\ \hline \end{array}$
11) $\begin{array}{r} 66 \\ \times 22 \\ \hline \end{array}$	12) $\begin{array}{r} 92 \\ \times 81 \\ \hline \end{array}$	13) $\begin{array}{r} 28 \\ \times 35 \\ \hline \end{array}$	14) $\begin{array}{r} 45 \\ \times 55 \\ \hline \end{array}$	15) $\begin{array}{r} 78 \\ \times 53 \\ \hline \end{array}$

Part 2

Solve the word problems below

1) A brick layer is building a brick retaining wall. They are using 34 rows of bricks that are 42 bricks tall. How many bricks do they need?



2) A football arena has 58 rows and 74 columns of seating. How many seats does the arena have in total?



Name: _____

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Curriculum Connection
N6.4

Multiplication – 2 x 2 Digits

Step 1: Setup up the Area Model

$32 \times 17 = \underline{\hspace{2cm}}$

	30	2
10		
7		

Step 2: Multiply

$32 \times 17 = \underline{\hspace{2cm}}$

	30	2
10	30 x 10 300	10 x 2 20
7	30 x 7 210	7 x 2 14

Step 3: Add

$32 \times 17 = 544$

	30	2
10	300	20
7	210	14

$300 + 210 + 20 + 14 = 544$

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

1) $32 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

2) $27 \times 23 = \underline{\hspace{2cm}}$

3) $45 \times 24 = \underline{\hspace{2cm}}$

4) $37 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

5) $82 \times 44 = \underline{\hspace{2cm}}$

6) $94 \times 72 = \underline{\hspace{2cm}}$

Multiplication – 1-Digit Multiplier - Wages

Questions

Solve the word problems below

Four friends work at a farm in the summer. They each earn different wages because they have difference job experience. The wages they earn and the hours they worked yesterday are listed below.



Friend	Ava	Mia	Charlotte	Emma
Earnings	12.35	15.75	13.40	17.65
Hours	9	7	8	6
Earnings				

- a) Who made the most money? How much did each friend earn? Fill in the table above

- b) How much did all 4 friends earn combined?

Multiplication Word Problems

Questions

Solve the word problems below

1) Brian bought his four children each a new backpack for school. Each backpack was \$28.55. How much did he spend on the backpacks?



2) Jade bought hot dogs for each player on her soccer team. The hot dogs cost \$2.75 each and there are 9 soccer players. How much did she spend on hot dogs?



3) Bella's dog is having a birthday soon. Bella bought her 7 dog toys that cost \$5.65 each. How much did she spend on toys?



4) Gavin has been paying for a video game subscription for the last 9 months. Each month costs him \$19.99. How much has he spent?



Exit Cards

Cut Out

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

Name: _____

Solve the word problems below

Ethan bought 3 video games. Each video game cost \$49.99. How much did he spend on video games?

Name: _____

Solve the word problems below

Ethan bought 3 video games. Each video game cost \$49.99. How much did he spend on video games?

Name: _____

Solve the word problems below

Ethan bought 3 video games. Each video game cost \$49.99. How much did he spend on video games?

Name: _____

Solve the word problems below

Ethan bought 3 video games. Each video game cost \$49.99. How much did he spend on video games?

Name: _____

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Curriculum Connection
N6.4

Division – Bar Model

Questions

Use the bar model to answer the division questions below

1) $64 \div 4$

64			

2) $84 \div 6$

84					

3) $120 \div 3$

120					

4) $190 \div 10$

190									

5) $104 \div 4$

104			

6) $96 \div 6$

96					

7) $154 \div 7$

154						

8) $153 \div 9$

153								

9) $126 \div 7$

126						

10) $128 \div 4$

128			

Name: _____

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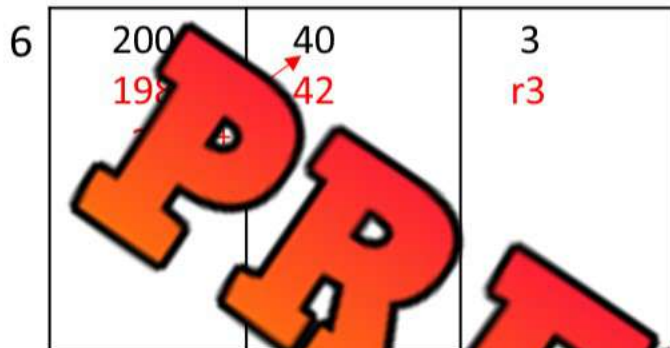
Curriculum Connection
N6.4

Division – Area Model

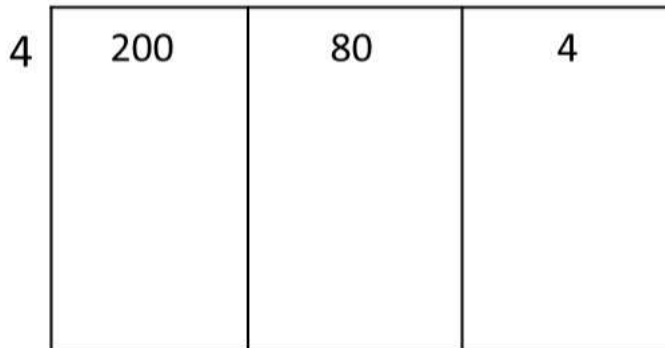
Questions

Use the area model to answer the division questions below

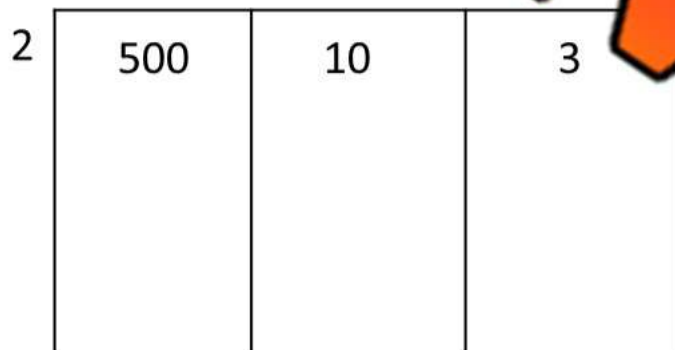
1) $243 \div 6 = 40\text{r}3$ (16+4)



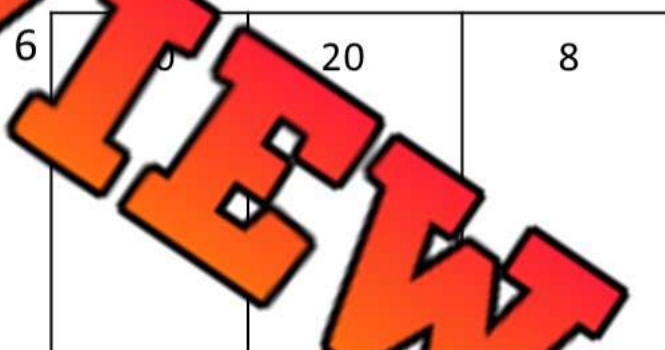
2) $284 \div 4$



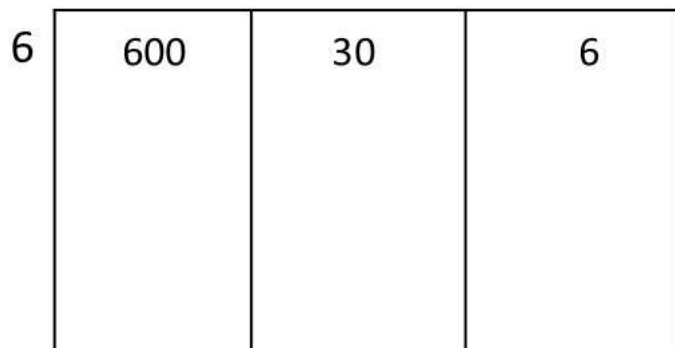
3) $513 \div 2$



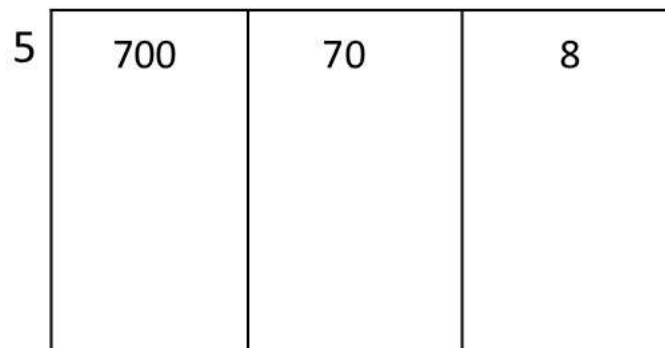
$428 \div 6$



5) $636 \div 6$



6) $778 \div 5$



Dividing Decimals – Removing Decimal

When dividing a decimal, we can remove the decimal and treat it as a whole number. We can do this as long as we add the decimal at the end.

Steps:

- 1) Remove the decimal
- 2) Calculate how many times the smaller number (divisor) fits into the dividend
- 3) Use front-end estimation to determine an estimated answer and add the decimal back to our final answer

Instructions: Follow the steps above to calculate the answer

1) Question	$3.30 \div 2 = ?$
Step 1 and 2	$330 \div 2 = 165$
Step 3	$3.00 \div 2 = 1.5$ so therefore, put the decimal between the 1 and 6
Answer	<u>1.65</u>

2) Question	$2 = ?$
Step 1 and 2	
Step 3	
Answer	

3) Question	$4.24 \div 4 =$
Step 1 and 2	
Step 3	
Answer	

4) Question	$3.39 \div 3 = ?$
Step 1 and 2	
Step 3	
Answer	

Front-End Estimation – Multiple Choice

Questions

Which estimate is the best? Use front-end estimation to make your choice

1) $21.25 \div 7$ a) 4 b) 3 c) 6 d) 5	2) $25.32 \div 5$ a) 5 b) 4 c) 6 d) 7
3) $64.72 \div 8$ a) 7 b) 9 c) 8 d) 6	4) $27.55 \div 3$ a) 7 b) 8 c) 9 d) 10
5) $49.64 \div 7$ a) 8 b) 6 c) 7 d) 9	6) $32.1 \div 4$ a) 6 b) 7 c) 5 d) 4
7) $44.85 \div 4$ a) 10 b) 11 c) 12 d) 9	8) $50.92 \div 5$ a) 10 b) 9 c) 11 d) 12
9) $26.42 \div 2$ a) 11 b) 12 c) 13 d) 14	10) $24.73 \div 3$ a) 8 b) 6 c) 7 d) 9

Name: _____

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Curriculum Connection
N6.4

Dividing Decimals by Whole Numbers

Questions

Use the area model to answer the division questions below. #1 is done for you

1) $0.844 \div 4$

0.844 is really 844 thousandths

4	80	40	4
			1

Therefore, 0.844 divided into 4 is 0.211
thousandths or 0.211

2) $0.224 \div 2$

2	200	20	4

3) $0.363 \div 3$

3	300	60	3

4) $0.396 \div 4$

4	300	90	6

5) $0.455 \div 5$

5	400	50	5

6) $0.488 \div 8$

8	400	80	8

Unit Test – Factors and Operations

Part 1

Which estimate is the best? Use front-end estimation to make your choice

1) 6.34×7

a) 42

b) 49

c) 50

d) 47

2) 7.26×5

a) 40

b) 30

c) 35

d) 38

3) 9.44×6

a) 50

b) 62

c) 54

d) 64

4) $27.21 \div 3$

a) 7

b) 8

c) 9

d) 10

5) $24.25 \div 3$

a) 5

b) 7

c) 8

d) 4

6) $30.5 \div 5$

a) 6

b) 4

c) 6

d) 7

Part 2

Use the standard algorithm to solve the multiplication problems below

1)					
		7	.	2	5
x					2

2)					
		5	.	6	3
x					5

3)					
	1	5	.	4	6
x					6

Part 3

Solve the word problems below

1) Carter bought 6 bags of chips for a camping trip. Each bag cost him \$3.39. How much did he spend on chips?



2) Lisa bought 6 drinks for her and her friends. How much did each drink cost?



3) A car drives 1.5 kilometres per minute. If it drives 10 minutes, how many kilometres will it travel?



4) Maria has 2.5 kilograms of tomatoes. She wants to divide them equally into 5 bags. How many kilograms of tomatoes will each bag have?



Part 4

Follow the directions below

1) Circle the prime numbers below

90	55	49	18	81	5
74	19	33	7	52	45
15	59	67	11	3	13

2) Circle the composite numbers below

12	54	13	62	75
	41	51	55	21
	19	25	51	43

Part 5

List all the factors for the numbers below

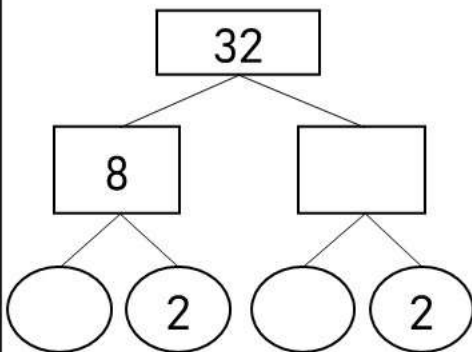
1) 12 _____, _____, _____, _____

2) 25 _____, _____, _____

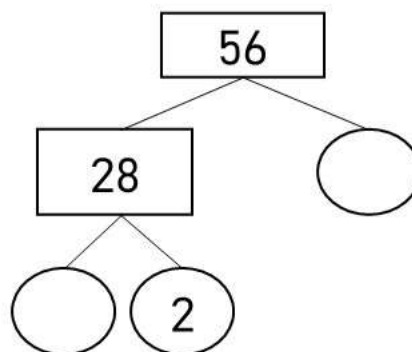
Part 6

Fill in the factor trees below

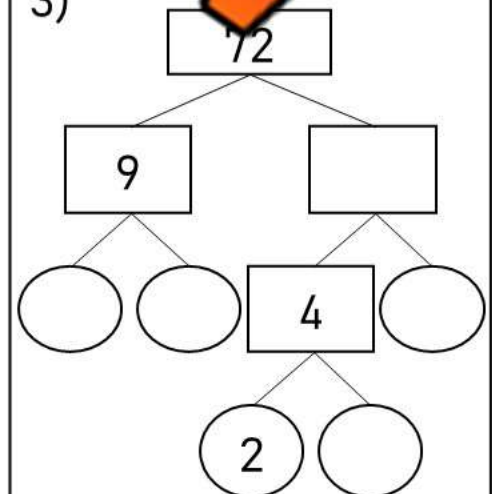
1)



2)



3)



Fractions, Decimals, and Percents

Part 1

Fill in the table with the converted decimal, fraction, and percent

Fraction	Decimal	Percent
100/1000		10.0%
200/1000		20.0%
	0.300	%
400/1000		40.0%
500/1000		%
		60.0%
		%
	0.800	%
900/1000		%
	1.000	%

Part 2

Convert the following fractions, decimals and percent

$138/1000 =$ %	$536/1000 = 0.$	$42.4\% =$ /1000	$798/1000 =$ %
$56.2\% =$ /1000	$161/1000 =$ %	$871/1000 = 0.$	$0.938 =$ %
$0.356 =$ %	$0.682 =$ %	$71.4\% = 0.$	$782/1000 = 0.$

Fraction/Decimal/Percent Bottle Flip Challenge

Objective

What are we learning about?

To practice and reinforce understanding of converting between fractions, decimals, and percents 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 without lids)
- Set of fraction, decimal, and percent conversion question cards
- Answer sheet (one per group)

Instructions

How you will complete the activity

1. Start with a short lesson on converting between fractions, decimals, and percents.
2. Arrange the students into pairs or small groups and give each 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 conversion problem between fractions, decimals, or percents.
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 get a point; 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.

Questions

Cut out the questions below and use for the game

1. $372/1000 = \underline{\hspace{1cm}}$ %	2. $655/1000 = 0.\underline{\hspace{1cm}}$	3. $981/1000 = \underline{\hspace{1cm}}$ %	4. $768/1000 = 0.\underline{\hspace{1cm}}$
5. $0.245 = \underline{\hspace{1cm}}$ %	6. $0.789 = \underline{\hspace{1cm}}$ %	7. $0.061 = \underline{\hspace{1cm}}$ %	8. $0.437 = \underline{\hspace{1cm}}$ %
9. $19.4\% = 0.\underline{\hspace{1cm}}$	10. $5.6\% = \underline{\hspace{1cm}}/1000$	11. $71.4\% = 0.\underline{\hspace{1cm}}$	12. $94.9\% = \underline{\hspace{1cm}}/1000$
13. $859/1000 = \underline{\hspace{1cm}}$	14. $469/1000 = \underline{\hspace{1cm}}$	15. $912/1000 = \underline{\hspace{1cm}}$	16. $7/1000 = \underline{\hspace{1cm}}$
17. Out of 100 students, 35 are in the chess club. What is the fraction, decimal, and percent for the number of students in the club?	18. In a class of 30 students, 18 are girls. What is the fraction, decimal, and percent for the number of girls in the class?	19. Out of 1200 votes, 720 were in favor. What is the fraction, decimal, and percent of votes in favor?	20. A car traveled 90 kilometers out of a 150-kilometer journey. What is the fraction, decimal, and percent for the distance traveled?
21. A recipe requires 250 grams of sugar out of 1000 grams of total ingredients. What is the fraction, decimal, and percent of sugar in the recipe?	22. A worker has 80 levels completed. What is the fraction, decimal, and percent for the completed levels?	23. Out of 75 employees, 45 work full-time. What is the fraction, decimal, and percent for full-time employees?	24. A shipment contains 250 items, and 60 of them are defective. What is the fraction, decimal, and percent of defective items?
25. In a survey, 150 out of 300 people said they prefer tea over coffee. What is the fraction, decimal, and percent for tea preference?	26. A factory produced 480 units, and 120 were rejected. What is the fraction, decimal, and percent of rejected units?	27. A train traveled 180 miles out of a 300-mile journey. What is the fraction, decimal, and percent for the distance traveled?	28. In a survey of 500 people, 250 gave positive responses. What is the fraction, decimal, and percent for positive responses?
29. A library has 1200 books, and 480 are fiction. What is the fraction, decimal, and percent of fiction books?	30. A batch of cookies made 240 cookies, and 180 were sold. What is the fraction, decimal, and percent for the cookies sold?	31. A tank holds 800 liters of water, and 600 liters are used. What is the fraction, decimal, and percent for the water used?	32. A survey found that 45 out of 150 people prefer reading books over watching movies. What is the fraction, decimal, and percent for people who prefer reading books?

Name: _____

159

Curriculum Connection
N6.5

Decimal Bottle Flip Challenge

Answers

Record your answers below

1	
2	
3	
4	
5	
6	
7	
8	

9	
10	
11	
12	
13	
14	
15	
16	

Name: _____

160

Curriculum Connection
N6.5

Decimal Bottle Flip Challenge

Answers

Record your answers below

17	
18	
19	
20	
21	
22	
23	
24	

25	
26	
27	
28	
29	
30	
31	
32	

Successful Flips Tally	
# of Wrong Answers	
Final Score: Successful Flips – Wrong Answers	

Mental Math – Calculating Percentages – 1%, 10%

Percentages represent a rate out of 100 in relation to a whole. Therefore, we can represent 1% as 0.01 and 10% as 0.1.

Example – $150 \times 0.01 = 1.5$ (1% of 150 is 1.5)
 $150 \times 0.10 = 15.0$ (10% of 150 is 15)



Instruction: Fill in the table below

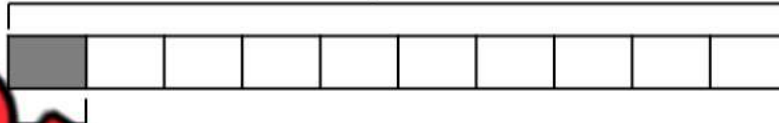
	Amount	$\times 0.01$	1%	$\times 0.10$	10%
1)					
2)	200				
3)	300				
4)	150				
5)	250				
6)	275				
7)	375				
8)	411				
9)	537				
10)	672				

Mental Math – Calculating Percentages – Visuals

When we want to find the percent of a number, scaling up and down is a great strategy.

For example, a shirt costs \$80 at regular price. To calculate a sale price, we can scale 10% up and down. First, 10% of 80 is 8 which means 20% is 16 and 30% is 24.

\$80

**Practice**

Solve the problems below

1) Tom is shopping for new shoes. He finds a pair he likes for \$70.00 that are on sale for 15% off. How much will the shoes cost before tax?



2) Lindsay is out shopping for a new winter coat. She sees one for \$90.00 plus an additional 20% off. How much will the coat cost before tax?



3) Joe brings \$100 to the mall to buy some new speakers. He finds some for \$78.00 with an additional 35% off.

- How much will the speakers cost before tax?
- With tax costing 15%, how much will the speakers cost?
- How much of the \$100 will Joe have when he leaves the mall?



Estimating Sales Tax

When we pay for something, we need to pay tax. **Tax** is an extra cost placed on a good or service that goes to the government. In BC, we pay 12% sales tax on almost everything we buy.

When we purchase something, we should add 12% to the total price so we know if we can afford it. We can do this by using a calculator or by estimating. Follow these steps to estimate the sales tax:

Estimating Tax

- 1) Divide the price by 10 (example - $\$32.00 \div 10 = \3.20) to determine 10% of the cost
- 2) We can then divide that number in half to find another 5% (example = $\$3.20 \div 2 = \1.60)
- 3) Add those numbers together to determine what a 15% sales tax would cost ($\$3.20 + \$1.60 = \$4.80$). So, a $\$32.00$ product would cost a total of $\$36.80$.

Instructions

Divide the price by 10 and then divide that answer by 2

#	Product Price	10%	Total Tax	Total Price
1	\$20.00	\$2.00	\$3.00	\$23.00
2	\$10.00			
3	\$30.00			
4	\$40.00			
5	\$50.00			
6	\$60.00			
7	\$25.00			
8	\$100.00			
9	\$42.00			
10	\$88.00			

Determining Sales Tax – Word Problems

Questions

Answer the word problems below

1) Kayden has a \$10 bill and wants to know if he can afford a burger and fry meal that costs \$8.00 before taxes. Calculate the total cost of the meal after adding 12% tax. Can he afford the meal?

Bonus: How much money does he have left?



2) Dexter wants to buy a video game that costs \$100 and the game costs \$65.00 before tax. How much will the game cost with 12% tax?

Bonus: How much money will he have left if he buys the game?



3) Mya is thinking of purchasing a new pair of headphones that cost \$59.00. She only has \$65.00. Does she have enough money to buy them after a 12% tax is added? Explain.



Class List – Decimal, Fraction, Percent

Mrs. Hansen just finished marking a math test. Her class list with the results of the test are below. She has simplified some of the fractions, and some students wrote a different test, meaning they are out of a different total.

Grades

A = 80% and up

B = 70%-79%

C = 60% – 69%

D = 50% – 59%

F = 49% or less

Questions Fill in the class list

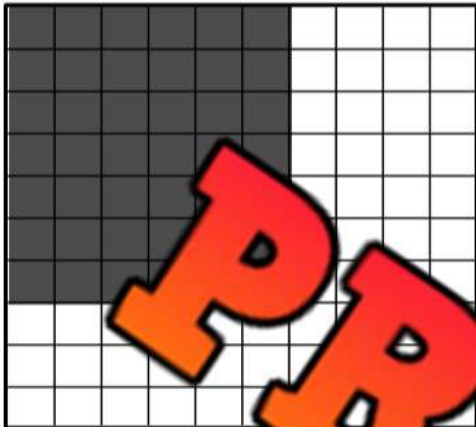


Student	Mark	Decimal	Percent	Grade
Madison				
Stella	1/100			
Matthew	9			
Eli	7/10			
John	1/2			
Kai	1/4			
Ivy	4/4			
Everly	1/5			
Bella	75/100			
Skylar	95/100			
Leah	8/10			
Roman	1/8			
Adrian	1/10			
Easton	4/5			
Savannah	77/100			

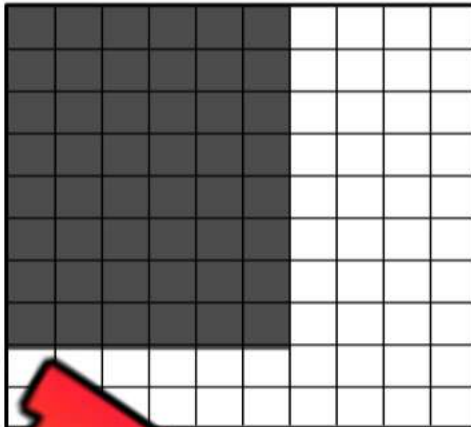
Quiz – Decimals, Fractions and Percent

Part 1

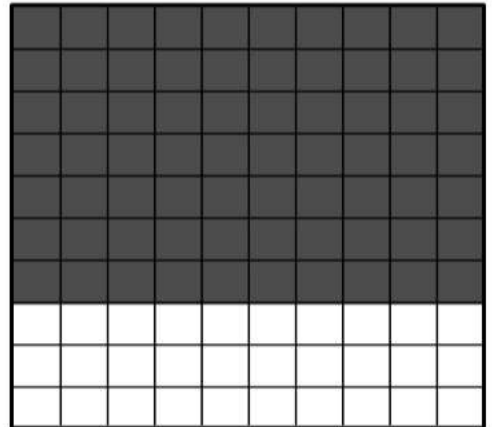
What fraction, decimal and percent of the array is shaded in?



Fraction	Decimal	Percent



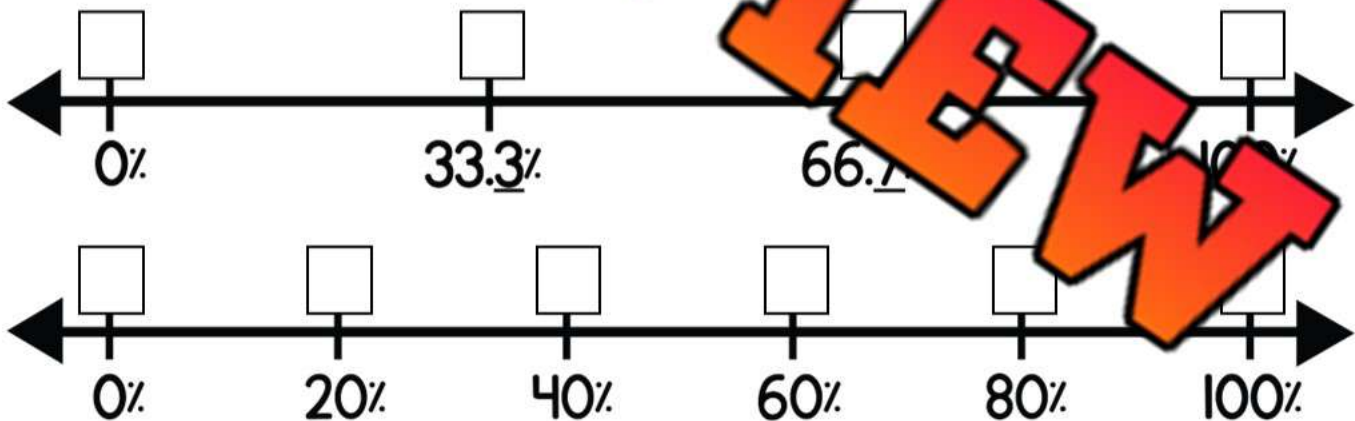
Fraction	Decimal	Percent



Fraction	Decimal	Percent

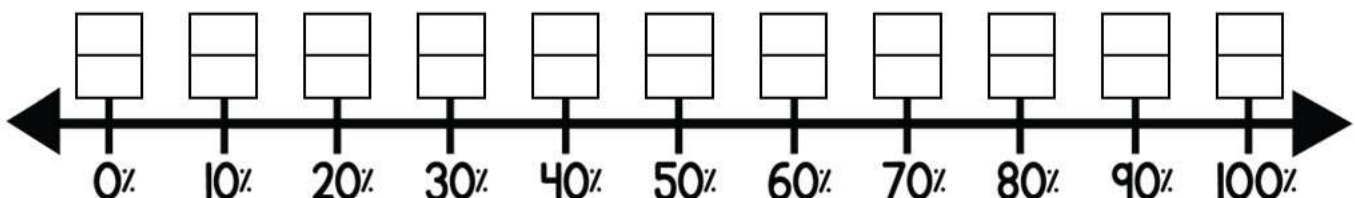
Part 2

Write the decimal above the percent



Part 3

Write the fraction above the percent



Part 4

Solve the problem below

4 friends competed in a 3-point shooting contest in basketball. They each took 50 shots. Their results are below.

Valentina	Claire	Dylan	Xavier
12/25	0.439	0.44	43%

- a) Who is the best shooter?
- b) Rank the friends in order of best shooter to worst shooter.

Part 5

Answer the word problem below

1) The grade 6's voted for their favourite food. There were 100 students and students had to vote for one option. The results are below.

- a) What percentage chose pizza?
- b) If there were 100 grade 6 students surveyed, how many chose pizza?

Pasta	15%
Ham	21%
Chicken	38%
Pizza	
Other	22%

2) On a science test, the percentage of grade 6's who scored A, B, C, D, and F is listed below.

- a) What percentage of students received an F?
- b) If there were 50 students who wrote the test, how many kids got an F?

A	17%
B	38%
C	21%
D	14%
F	

Graphing Integers & Opposite Integers

Part 1

Graph each integer by writing the letter on the number line



a) 0

e) -18

i) 3

m) -6

b) 6

f) -17

j) 15

n) -7

c) 1

g) 20

k) -20

o) -10

d) 18

h) 7

L) -3

p) 17

Part 2Which letter pairs are opposites? Write the letter pairs in the boxes below.
(hint: an opposite integer is the same number but with the opposite sign – ex. 3 and -3)

1) _____

2) _____

3) _____

4) _____

5) _____

6) _____

7) _____

8) _____

Part 3

Write the opposite integer below

1) 8

2) 12

3) -18

4) 14

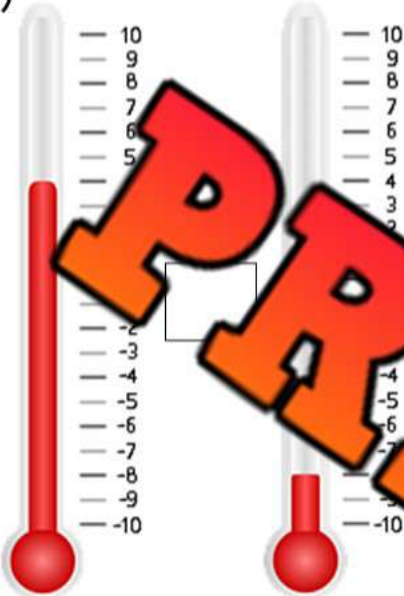
5) -4

6) -10

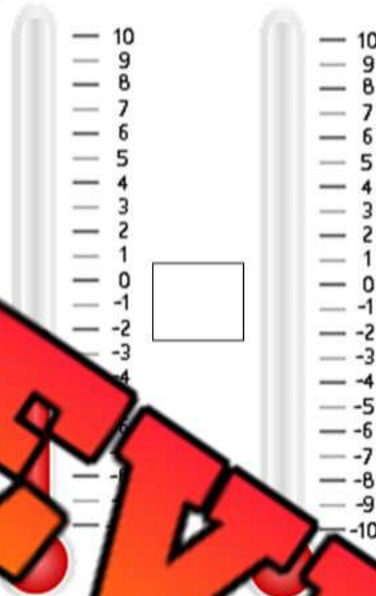
Integers – Comparing Temperatures

InstructionsUse the $<$, $>$, $=$ to compare that temperatures. Which temperature is higher?

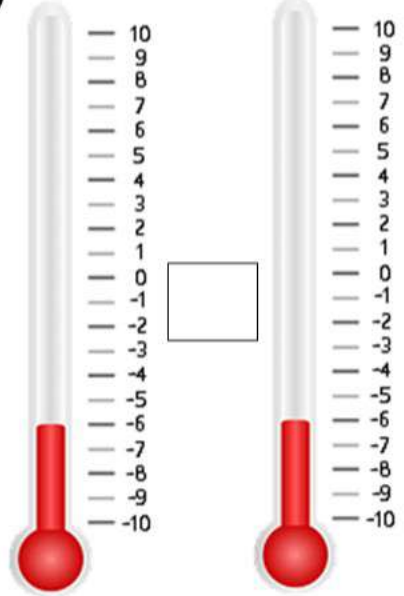
1)



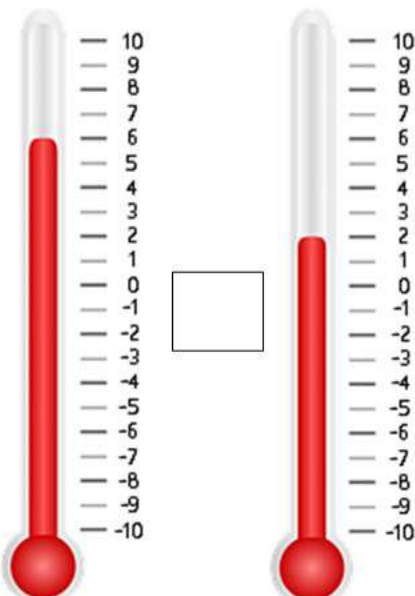
2)



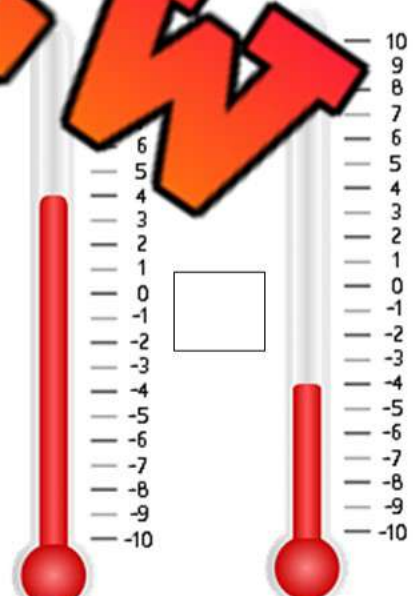
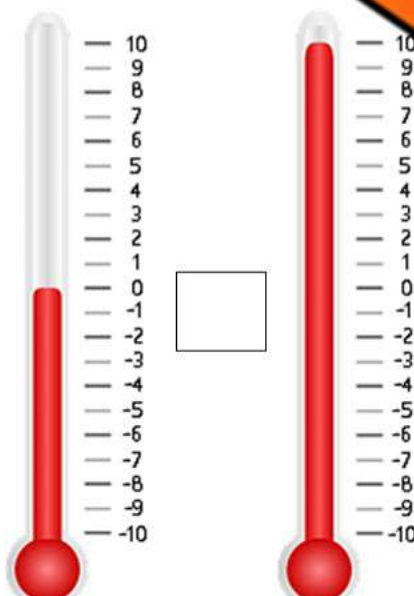
3)



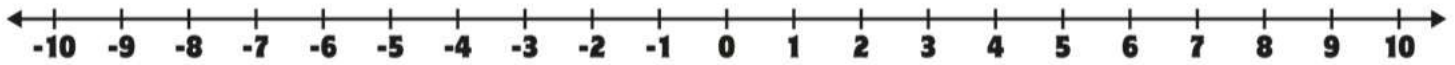
4)



5)



Ordering Integers – Least to Greatest

**Part 1**

Arrange the integers from least to greatest

1) 5, 3, -6, -9, 7	2) -4, 4, 8, 2, -9
3) 4, -5	4) -5, -4, -6, -2, -7
5) 5, -3, -8, 0	6) -5, -1, 6, 0, 2
7) 4, 0, -2, -9, -6	8) 11, 2, -3, -5
9) 15, -23, -12, -16, 7	10) -15, -11, 1, 0, 10

Part 2

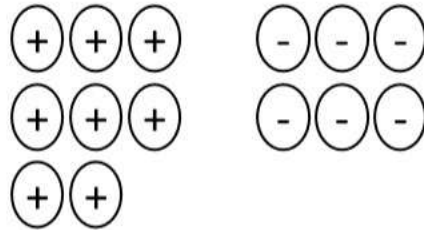
Answer the word problem below

The average temperatures for the first 5 months of the year are recorded below.
Arrange the months in order of coldest to warmest.

January = -5°C February = -8°C March = -3°C April = 2°C May = 10°C

_____, _____, _____, _____, _____

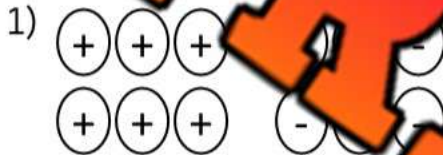
Adding Integers - Visuals



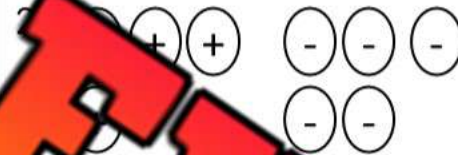
$$8 + (-6) = 2$$



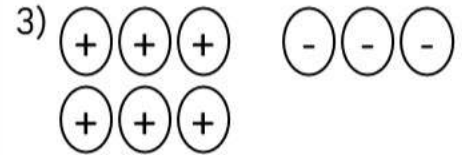
Instructions: Use the visual models to solve the equations below. What is the difference?



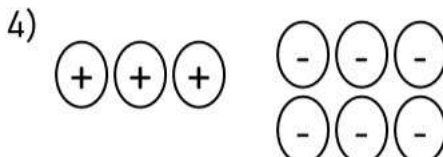
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$



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



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



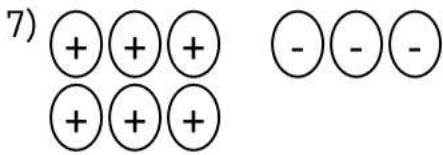
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$



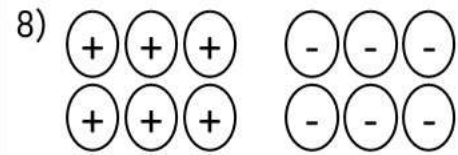
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$



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



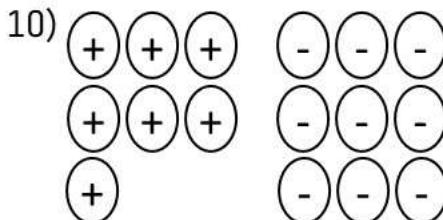
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$



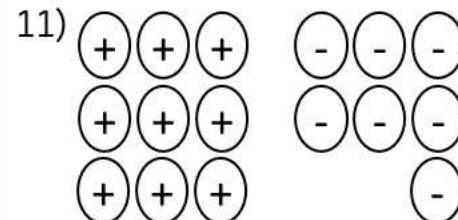
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$



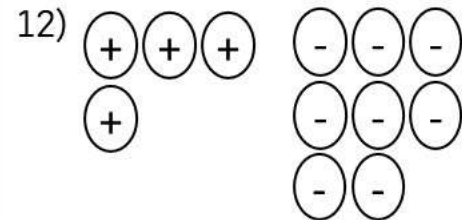
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$



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



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



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

Golf – Adding Integers – Zero Pairs

Word Problems

Solve the word problems below using counter chips



- 1) Alice played 2 rounds of golf. Her final scores for both rounds are on the scorecard. What is the total score for the two rounds?



Round	Score
1	-7
2	+10
Total Score	

Equation: _____ + _____ = _____

- 2) Theo played 3 rounds of golf. His final scores for all three rounds are on the scorecard. What is his total score?



Round	Score
1	-4
2	-2
3	+4
Total Score	

Equation: _____ + _____ + _____ = _____

- 3) Leah played 4 rounds of golf. Her final scores are on the scorecard. What is her total score?

R1	R2	R3	R4	Total Score
-5	3	-3	-4	

Equation: _____ + _____ + _____ + _____ = _____

- 4) Miles played 4 rounds of golf. His final scores are written on the scorecard. What is his total score?

R1	R2	R3	R4	Total Score
7	2	-7	-3	

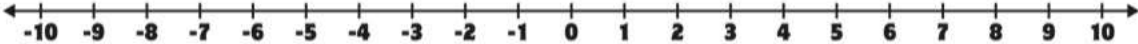
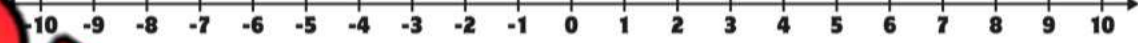
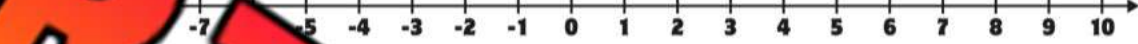


Equation: _____ + _____ + _____ + _____ = _____

Adding Integers – Using Number Lines

Part 1

Use the number lines to solve the questions

1) $7 + (-4) =$	
2) $-9 + 10 =$	
3) $-5 + 7 =$	
4) $-7 + 11 =$	
5) $8 + (-12) =$	
6) $-10 + 15 =$	

Part 2

Answer the word problems below. Write the equation.

- 1) A football team loses 6 yards on one play and then loses 5 yards on the next play. How many total yards did they lose?

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



- 2) In golf, Roger played two rounds. He scored a +4 and a -6. What was his total score?

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



Adding Integers – Using Number Lines

-20	-19	-18	-17	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	----	----	----	----	----	----	----	----	----

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

Part 1

Solve the questions below

1) $5 + (-)$	6) $-15 + 11 + (-5) =$
2) $18 + (-6) =$	7) $17 + (-6) + (-8) =$
3) $-12 + 5 + (-6) =$	8) $-15 + (-5) + 11 =$
4) $13 + (-6) + (-4) =$	9) $11 + (-7) =$
5) $-11 + 4 + (-2) =$	10) $10 + (-) =$

Part 2

Answer the word problems below. Write the equation and solution

- You take 9 steps forwards, 7 steps backwards, another 5 steps forwards, and another 4 steps forwards. How far have you moved in steps?
- The Big Dipper rollercoaster climbs straight up 30m above ground level before it drops 18m. Next, it climbs another 22m before it drops 17m. When the ride is over, the participants are how much higher than ground level?



Adding Integers - Rules

Adding Integers Rules

$\oplus + \oplus = \oplus$ Adding 2 positive integers will always give a positive answer

$\ominus + \ominus = \ominus$ Adding 2 negative integers will always give a negative answer

$\oplus + \ominus = \ominus$ Adding integers with different signs $\rightarrow$ use the larger number

$\ominus + \oplus = \oplus$ Adding integers with different signs $\rightarrow$ use the larger number

*** If the integers have the same sign, add them and keep the sign

*** If the integers have different signs, subtract them and use the sign of the larger number

Directions

Use the rules to answer the 1-step questions below



1) $42 + (-13) =$

5) $17 + (-12) =$

2) $57 + (-66) =$

6) $(-151) + (-136) =$

3) $-132 + (-112) =$

7) $213 + (-158) =$

4) $(+33) + (+86) =$

8) $-328 + (+113) =$

Mixed Numbers and Improper Fractions

Instructions

Shade in the fractions and write the mixed number

1)



$$= 2 \frac{1}{3}$$

2)



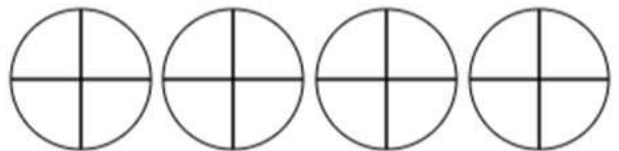
$$\frac{9}{2} =$$

3)



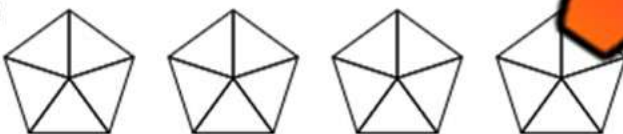
$$\frac{6}{4} =$$

4)



$$\frac{14}{4} =$$

5)



$$\frac{17}{5} =$$

6)



$$=$$

7)



$$\frac{13}{3} =$$

8)



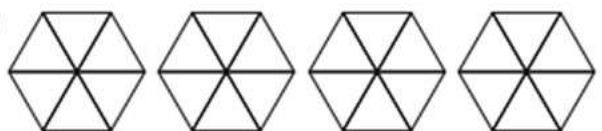
$$\frac{15}{4} =$$

9)



$$\frac{8}{3} =$$

10)



$$\frac{19}{6} =$$

Converting Mixed Numbers to Improper Fractions

Instructions

Convert the mixed numbers to improper fractions

1) $5\frac{3}{4} =$

2) $4\frac{1}{5} =$

3) $5\frac{4}{5} =$

4) $5\frac{1}{5} =$

5) $3\frac{4}{7} =$

6) $6\frac{2}{4} =$

7) $4\frac{2}{4} =$

8) $5\frac{1}{5} =$

9) $2\frac{3}{7} =$

10) $5\frac{2}{3} =$

11) $3\frac{4}{8} =$

12) $2\frac{2}{4} =$

13) $4\frac{1}{5} =$

14) $2\frac{2}{7} =$

15) $4\frac{1}{4} =$

16) $7\frac{1}{2} =$

17) $6\frac{2}{4} =$

18) $8\frac{3}{4} =$

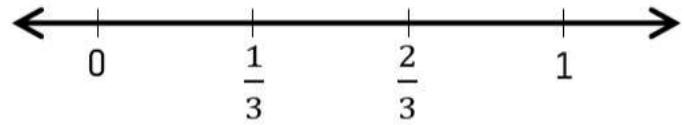
19) $4\frac{1}{2} =$

20) $3\frac{4}{5} =$

21) $5\frac{4}{5} =$

Proper Fractions – Number Line

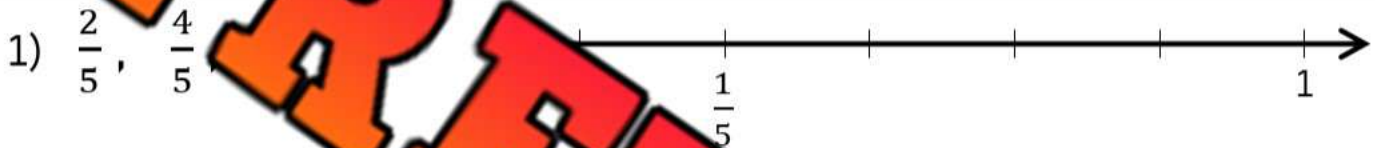
A **proper fraction** has a numerator (top number) smaller than the denominator (bottom number). When we place a proper fraction on a number line, it will always fall between 0 and 1.



Example

- 1) The denominator tells us how many equal parts are between 0 and 1
- 2) The numerator tells us how many parts starting from zero we move to plot our fraction

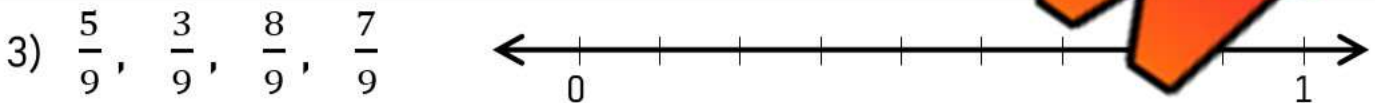
Practice: Plot the proper fractions on the number lines below



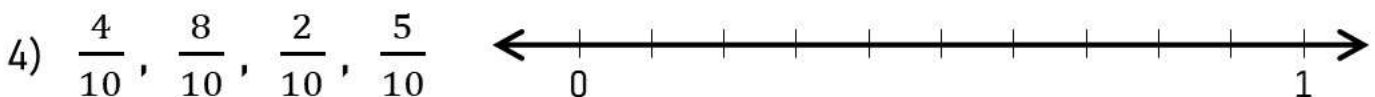
Put in order from least to greatest: _____



Put in order from least to greatest: _____



Put in order from least to greatest: _____



Put in order from least to greatest: _____

Equivalent Fractions

Instructions

Fill in the blanks to find equivalent fractions



1) $\frac{1}{2} = \frac{2}{\quad} = \frac{\quad}{6} = \frac{4}{\quad} = \frac{\quad}{10} = \frac{6}{\quad} = \frac{\quad}{14}$

2) $\frac{1}{3} = \frac{\quad}{9} = \frac{4}{\quad} = \frac{\quad}{15} = \frac{6}{\quad} = \frac{\quad}{21}$

3) $\frac{1}{4} = \frac{\quad}{16} = \frac{\quad}{20} = \frac{6}{\quad} = \frac{\quad}{28}$

4) $\frac{1}{5} = \frac{2}{\quad} = \frac{\quad}{15} = \frac{\quad}{20} = \frac{\quad}{25} = \frac{6}{\quad} = \frac{7}{\quad}$

5) $\frac{1}{6} = \frac{\quad}{12} = \frac{3}{\quad} = \frac{4}{\quad} = \frac{\quad}{18} = \frac{\quad}{24} = \frac{\quad}{42}$

6) $\frac{1}{7} = \frac{\quad}{14} = \frac{\quad}{21} = \frac{4}{\quad} = \frac{5}{\quad} = \frac{\quad}{42} = \frac{\quad}{49}$

7) $\frac{1}{8} = \frac{\quad}{16} = \frac{3}{\quad} = \frac{4}{\quad} = \frac{5}{\quad} = \frac{\quad}{48} = \frac{\quad}{56}$

8) $\frac{1}{9} = \frac{\quad}{18} = \frac{3}{\quad} = \frac{\quad}{36} = \frac{\quad}{45} = \frac{6}{\quad} = \frac{7}{\quad}$

Proper Fractions – Number Line

Practice

Plot the fractions on the number line

1) $\frac{2}{8}, \frac{1}{8}, \frac{5}{8}, \frac{3}{8}, \frac{7}{8}, \frac{6}{8}$



2) $\frac{3}{10}, \frac{8}{10}, \frac{5}{10}, \frac{9}{10}, \frac{6}{10}$



3) $\frac{7}{8}, \frac{5}{8}, \frac{1}{4}, \frac{1}{2}, \frac{2}{2}$



4) $\frac{11}{12}, \frac{9}{12}, \frac{7}{12}, \frac{5}{6}, \frac{3}{6}, \frac{1}{6}, \frac{1}{3}, \frac{3}{3}$



Comparing and Ordering Fractions

Part 1Use the $<$, $>$, $=$ to compare the fractions below

1) $\frac{6}{8}$ $\frac{5}{4}$	4) $\frac{3}{6}$ $\frac{5}{10}$	7) $\frac{6}{2}$ $\frac{9}{4}$
2) $\frac{3}{2}$ $\frac{1}{2}$	5) $\frac{9}{1}$ $\frac{8}{1}$	8) $\frac{2}{10}$ $\frac{10}{2}$
3) $\frac{5}{9}$ $\frac{5}{18}$	6) $\frac{5}{6}$ $\frac{5}{4}$	9) $\frac{6}{1}$ $\frac{5}{1}$

Part 2

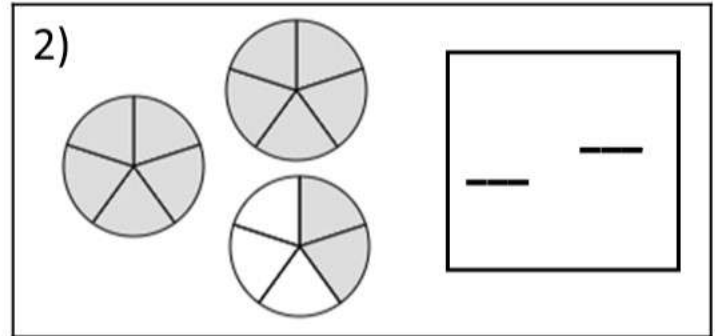
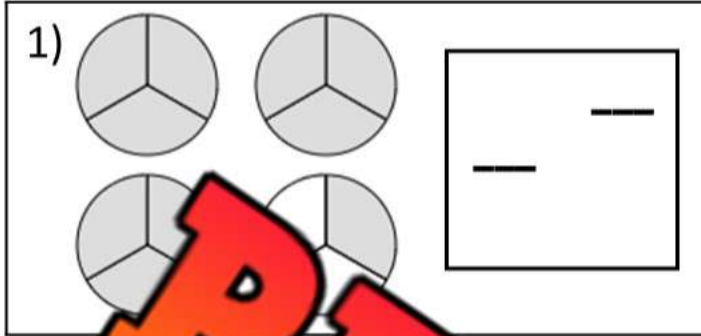
Arrange the fractions in least to greatest

1) $\frac{6}{2}$, 5, $\frac{12}{2}$, $\frac{16}{4}$, 2, 7
2) $\frac{9}{2}$, 4, $\frac{11}{2}$, $\frac{15}{5}$, $\frac{5}{1}$, 6
3) $\frac{14}{3}$, 4, $\frac{15}{4}$, $\frac{20}{4}$, 3, $\frac{20}{10}$, 8

Quiz - Fractions

Part 1

Write the fraction beside the visual fractions



Part 2

Convert the improper fractions to mixed numbers

1) $\frac{13}{5} =$

3) $\frac{11}{3} =$

Part 3

Convert the mixed numbers to improper fractions

1) $5\frac{3}{4} =$

2) $4\frac{1}{5} =$

Part 4

Put the mixed numbers in order from least to greatest

1) $4\frac{2}{4}$ $2\frac{3}{7}$ $5\frac{3}{5}$ $2\frac{1}{7}$ $2\frac{6}{7}$

2) $3\frac{2}{4}$ $1\frac{2}{5}$ $4\frac{2}{6}$ $7\frac{3}{7}$ $4\frac{5}{6}$

Part 5

Put the improper fractions in order from least to greatest

$$\frac{16}{5}$$

$$\frac{13}{5}$$

$$\frac{9}{5}$$

$$\frac{21}{4}$$

$$\frac{16}{4}$$

$$\frac{21}{5}$$

Part 6

Plot the fractions on the number line

1)

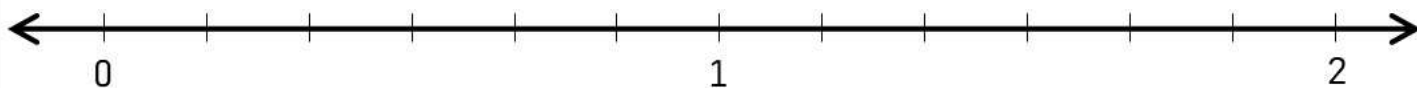
$$\frac{5}{8}, \frac{7}{8}, \frac{6}{8}$$



2) $2\frac{3}{6}, 1\frac{2}{6}, 2\frac{5}{6}, 1\frac{4}{6}, 2\frac{1}{6}$



3) $\frac{4}{6}, \frac{10}{6}, \frac{10}{12}, 1\frac{3}{6}, \frac{8}{6}, 1\frac{1}{6}$



Ratio In 3 Ways

Part 1

Write the ratios for the questions below

1) Ratio of 35 balls to 78 strikes.	Words: _____ Ratio: _____ Fraction: _____	5) Ratio of sitting for 30 minutes to standing for 60	Words: _____ Ratio: _____ Fraction: _____
2) Ratio of 3 dunks to three pointers	Words: _____ Ratio: _____ Fraction: _____	6) Ratio of 1 grade 8 to 1 grade 7	Words: _____ Ratio: _____ Fraction: _____
3) Ratio of 10 cars to 3 trucks	Words: _____ Ratio: _____ Fraction: _____	7) Ratio of 3 free throws to 1 shot	Words: _____ Ratio: _____ Fraction: _____
4) Ratio of 2 coffees to 6 waters	Words: _____ Ratio: _____ Fraction: _____	8) Ratio of 1 treat to 1 healthy snack	Words: _____ Ratio: _____ Fraction: _____

Part 2

Answer the word problems below

- 1) A baseball pitcher threw a ratio of 1 ball to 3 strikes. The pitcher threw 75 strikes. How many balls did they throw?
- 2) A hockey player has a ratio of 1 goal for every 8 shots they took. The player scored 5 goals today. How many shots did they take?



Equivalent Ratios – Scaling Up and Down

A **ratio** shows the relationship between two amounts.

Example  

The ratio of cars to bikes is 2:8. There are four times as many bikes as cars. You could also say there are four times less cars than bikes. We can scale down the ratio and say the ratio of cars to bikes is 1:4. We can also scale up by saying the ratio of cars to bikes is 4:16. These are equivalent ratios.

Instruction: Write the ratio of the images. Then write a scaled up and down equivalent ratio



Scaled Up

Scaled Down

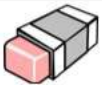
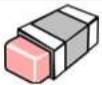
The ratio of skates to pucks is: _____:



Scaled Up

Scaled Down

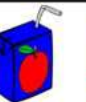
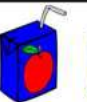
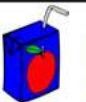
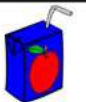
The ratio of laptops to televisions is: _____:



Scaled Up

Scaled Down

The ratio of erasers to pencils is: _____:



Scaled Up

Scaled Down

The ratio of juice to chips is: _____:



Scaled Up

Scaled Down

The ratio of basketballs to soccer balls is: _____:

Equivalent Ratios – Scaling Up and Down

Instructions

Circle two equivalent ratios for each of the questions below

1) 2:8	2:6	4:8	4:16	1:4	1:2
2) 2:12	1:8	4:22	1:6	1:4	4:24
3) 6:8	9:14	12:18	12:16	3:8	
4) 2:4	4:6	4:7	4:8	1:4	1:2
5) 10:12	20:24	5:16	5:10	10:24	5:6
6) 5:10	1:2	5:20	10:10	10:20	10:30
7) 4:14	2:10	8:28	2:7	7:2	8:24
8) 10:30	10:60	20:15	5:15	20:60	20:10
9) 2:20	6:60	6:80	1:20	1:30	1:10
10) 4:8	8:12	8:16	8:14	2:4	2:6

Memory Game: Matching Equivalent Ratios

Objective

What are we learning about?

Students will learn to identify and match equivalent ratios through a fun and interactive game.

Materials

What you will need for the activity.

- Memory game cards. Each card will have a different ratio which can be matched to another equivalent ratio.
- A small table or clear floor space for the game.



Instructions

How you will complete the activity.

1. Divide the class into groups of 3 or 4. Give each group a set of Memory Game cards. (provided)
2. Have each group lay all the cards face down in a grid on a table or clear floor space.
3. The students take turns flipping over two cards at a time, trying to find a matching equivalent ratio.
4. If a student finds a match, they remove those cards from the grid and keep them.
5. If the cards do not match, they are turned back over, and the next student takes a turn.
6. The game continues until all the cards have been matched.
7. After the game, review the equivalent fractions with the class.

Name: _____

235

Curriculum Connection
N6.8

Cards

Memory Game Cards

10:30

5:15

PREVIEW

12:4

6:12

8:32

2:8

14:28

7:14

16:40

4:10

Name: _____

238

Cards

Memory Game Cards

45:90

5:10

42:4

6:12

48:96

6:12

54:108

9:18

60:90

4:6

PREVIEW

Quiz - Ratios

Part 1

Write the ratios for the questions below

1) Ratio of 41 balls to 67 strikes.

Words: _____

Ratio: _____

Fraction: _____

2) Ratio of 10 green apples to 15 red apples.

Words: _____

Ratio: _____

Fraction: _____

3) Ratio of 27 cars to 12 trucks.

Words: _____

Ratio: _____

Fraction: _____

4) Ratio of 25 students to 1 teacher.

Words: _____

Ratio: _____

Fraction: _____

Part 2

Fill in the ratio table below to answer the questions

1) A store sells sugar by the kilogram. If a 3kg bag costs \$7.50, how much would a 1kg bag cost? Use the ratio table to help find the answer.



Weight (kg)	Cost \$
3	7.50
1	

2) Sam drives 550 kilometres in 5 hours. How fast did he drive per hour? Use the ratio table.



Hours	Distance
1	
2	
3	
4	
5	550

Part 3

Answer the word problems below

1) At the zoo, the ratio of gorillas to monkeys is 1:5. There are 5 gorillas in the zoo. How many monkeys are there?

2) At the zoo, the ratio of snakes to lizards is 1:10. There are 20 lizards. How many snakes are there?

3) At the zoo, the ratio of lions to elephants is 2:6. One of the lions is released back into the wild. How many elephants should be released back into the wild?

Part 4

Circle two equivalent ratios for each question below

1) 2:8	2:6	4:8	4:16	1:4	1:2
2) 2:12	1:8	4:22	1:6	1:4	4:24
3) 6:8	3:4	12:14	12:18	12:16	3:8
4) 2:4	4:6	4:7	4:8	1:4	1:2