



# Preview - Information



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# Google Slides Lessons Preview






# BC 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?

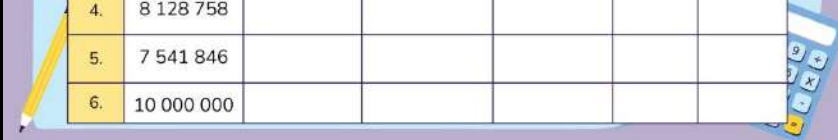
Imagine you're saving up for a new bike that costs \$1489. If you don't understand place value, you might think it's only \$148 and show up at the store with way too little money! Knowing place value helps you understand big numbers, so you can save, spend, and count your money like a pro!



### Place Value - How Many...



#	Number	# of Millions	# of Thousands	# of Hundreds	# of Tens	# of Ones
1.	657 529					
2.	2 443 469					
3.	3 809 362					
4.	8 128 758					
5.	7 541 846					
6.	10 000 000					



### Part 2 – Action!

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

### Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!

#### Solve...

My number has 9 hundred thousands, 7 ten thousands, 8 thousands, 5 less hundreds than thousands, 2 ones, and 3 more tens than ones. What is my number?

Drag the base ten blocks below

Write the Number:





# BC Math Curriculum Number Unit - Grade 6

## Place Value - Matching

Draw a line from the base ten blocks to the number they represent.

12 074

11 169

9 433

16 210

Sign between the numbers.

#	Number 1	Sign	Number 2
1	112 713		112 726
2	326 132		426 118
3	3 435 324		3 332 617
4	4 543 882		4 543 882
5	2 048 354		2 048 314
6	3 510 893		3 510 893

#	Number 1	Sign	Number 2
7	551 632		552 610
8	3 761 844		3 762 745
9	5 467 315		5 467 315
10	7 872 991		7 872 543
11	886 475		886 692
12	9 193 721		9 193 463

Bella and Sima

	Question	Bella	Sim
1)	$(4 \times 6) - 8$	18	16
2)	$49 - (4 \times 2)$	38	41
3)	$(9 \times 5) + 8$	53	18
4)	$2 + 6 \times 5 \div 2$	17	11
5)	$8 \div 2 \times (6 \times 4)$	24	96



# BC Math Curriculum Number Unit – Grade 6

### Factors

Drag the blocks into the respective boxes to show the factors of each number.

8	17	18
49	45	24

Available blocks: 12, 1, 49, 1, 4, 9, 2, 1, 3, 9, 7, 6, 6, 4, 3, 4, 8, 5, 18, 1, 24, 15, 1, 2, 1, 2, 5, 45, 9, 8

Paste the sticky notes on the specified board.

45, 95, 105, 135, 351, 501, 81, 570, 456, 3456

Divisible by 5

Divisible by 9

Answer Bank

$\frac{2}{3}$	$\frac{4}{5}$
$\frac{1}{3}$	$\frac{1}{2}$
$\frac{3}{4}$	$\frac{2}{5}$
$\frac{3}{4}$	$\frac{7}{12}$
$\frac{1}{2}$	$\frac{3}{4}$

2)  $\frac{5}{10} \rightarrow$

3)  $\frac{8}{12} \rightarrow$

4)  $\frac{12}{16} \rightarrow$

5)  $\frac{14}{24} \rightarrow$

7)  $\frac{30}{40} \rightarrow$

8)  $\frac{25}{50} \rightarrow$

9)  $\frac{12}{30} \rightarrow$

10)  $\frac{36}{48} \rightarrow$



# Workbook Preview



# Grade 6

## Number Elaborations

	Curriculum Elaborations	Pages
<b>N.1</b>	small to large numbers (thousandths to billions)	5 - 58
<b>N.2</b>	multiplication and division facts to 100 (developing computational fluency)	61 - 105
<b>N.3</b>		8
<b>N.4</b>		9
<b>N.5</b>	improper fractions and mixed numbers	140 - 154
<b>N.6</b>	introduction to ratios	155 - 169
<b>N.7</b>	whole-number percents and percentage discounts	174 - 197
<b>N.8</b>	multiplication and division of decimals	198 - 250

**Preview of 125 pages from  
this product that contains  
485 pages total.**

Name: \_\_\_\_\_

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Curriculum Connection  
N.1

## Place Value – How Many ...

Number	# of Millions	# of Thousands	# of Hundreds	# of Tens	# of Ones
3 322 457	3	322	4	5	7

### Part 1

Fill in the table below

#	Number	# of Millions	# of Thousands	# of Hundreds	# of Tens	# of Ones
1	2 100 000					
2	8 000 020					
3	7 584 251					
4	1 945 328					
5	3 854 198					
6	2 050 187					
7	8 756 054					
8	7 681 362					
9	4 685 114					
10	6 820 047					

### Part 2

Fill in the blanks with the missing number

- 1)  $4\,624\,323 = 4\,000\,000 + 600\,000 + 20\,000 + \underline{\hspace{2cm}} + 300 + 20 + 3$
- 2)  $3\,641\,781 = \underline{\hspace{2cm}} + 600\,000 + \underline{\hspace{2cm}} + 1\,000 + 700 + 80 + 1$
- 3)  $2\,379\,458 = \underline{\hspace{2cm}} + 300\,000 + \underline{\hspace{2cm}} + 9\,000 + 400 + 50 + 8$
- 4)  $6\,217\,523 = 6\,000\,000 + 200\,000 + 10\,000 + \underline{\hspace{2cm}} + 500 + \underline{\hspace{2cm}} + 3$
- 5)  $8\,602\,489 = \underline{\hspace{2cm}} + 600\,000 + 0 + 2\,000 + \underline{\hspace{2cm}} + 80 + 9$

Name: \_\_\_\_\_

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## Expanded Form

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

### Part 1

What is the standard form of the numbers below?

1) 7 000 + 30 000 + 1 000 + 400 + 80 + 2	
2) 2 000 + 700 + 6 000 + 300 + 70 + 6	
3) 8 000 000 + 50 000 + 400 + 80 + 9	
4) 4 000 000 + 300 000 + 1 000 + 70 + 5	
5) 6 000 000 + 400 000 + 10 000 + 3 000 + 1	

### Part 2

What is the expanded form of the numbers below?

1) 5 262 847
2) 2 465 447
3) 9 758 682
4) 7 158 318
5) 9 427 207

# Exit Cards

Cut Out

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

Name: \_\_\_\_\_

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

$$3\ 000\ 000 + 700\ 000 + 60\ 000 + 1\ 000 + 200$$

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

7 591 309

Name: \_\_\_\_\_

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

$$3\ 000\ 000 + 700\ 000 + 60\ 000 + 1\ 000 + 200 + 40 + 1$$

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

7 591 309

Name: \_\_\_\_\_

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

$$3\ 000\ 000 + 700\ 000 + 60\ 000 + 1\ 000 + 200 + 40 + 1$$

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

7 591 309

Name: \_\_\_\_\_

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

$$3\ 000\ 000 + 700\ 000 + 60\ 000 + 1\ 000 + 200 + 40 + 1$$

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

7 591 309

Name: \_\_\_\_\_

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## Written Form

1 - One	5 - Five	9 - Nine	13 - Thirteen	17 - Seventeen	30 - Thirty	70 - Seventy
2 - Two	6 - Six	10 - Ten	14 - Fourteen	18 - Eighteen	40 - Forty	80 - Eighty
3 - Three	7 - Seven	11 - Eleven	15 - Fifteen	19 - Nineteen	50 - Fifty	90 - Ninety
4 - Four	8 - Eight	12 - Twelve	16 - Sixteen	20 - Twenty	60 - Sixty	100 - Hundred
						1000 - Thousand
						1000000 - Million

### Part 1 Write the standard form of the written words below

1) One hundred thirty-two thousand, five hundred and fifty-eight	2) Five million, seven hundred sixty-three thousand, three hundred twelve
3) Two million, four hundred seventy-two thousand, nine hundred and five	4) Nine million, eight hundred thirty-two thousand, one hundred thirty-nine
5) Seven million, five hundred eighty-two thousand, one hundred ninety-nine	6) Four million, three hundred twelve thousand, one hundred sixty-two

### Part 2 Write the written form of the number below

1) 1 345 142
2) 4 527 351
3) 6 512 257
4) 2 464 495
5) 7 450 246

Standard Form

Words

Expanded Form

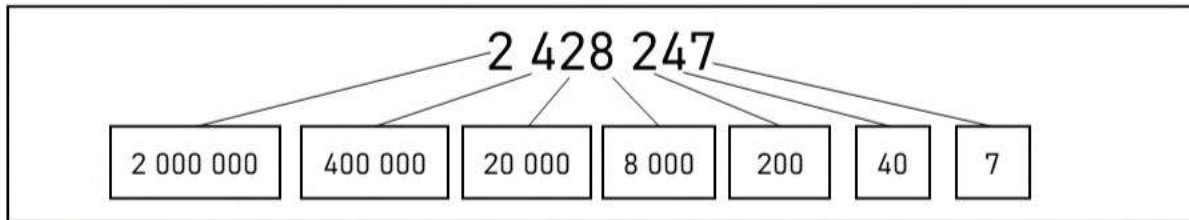
Place Value Chart

Millions	H. Thousands	T. Thousands	Thousands	Hundreds	Tens	Ones

Pictures

**PREVIEW**

# Decomposing Numbers



## Questions

Decompose the numbers below

1)

2 8

2)

3 247 521

3)

4 734 419

4 138 243

5)

6 821 757

6)

95

7)

8 947 446

8)

6 325 891

9)

9 743 589

10)

3 294 215

# Place Value - Number Breakdown

## Questions

Fill in the blanks below

Number Breakdown

# 3 846 853

Write the value of the underlined digit

1) 3 846 853 = \_\_\_\_\_

2) 3 846 853 = \_\_\_\_\_

3) 3 846 853 = \_\_\_\_\_

4) 3 846 853 = \_\_\_\_\_

M	H	Th	H	T	O

Fill in the blanks using the expanded form below

\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_

Fill in the pattern below

3 846 853 + \_\_\_\_\_ + 3 846 855 + \_\_\_\_\_ + 3 846 858

Fill in the pattern below

3 846 853 + 3 856 853 + \_\_\_\_\_ + 3 876 853 + \_\_\_\_\_

Fill in the pattern below

3 846 853 , 4 846 853 , \_\_\_\_\_ , \_\_\_\_\_ , 7 846 853 , \_\_\_\_\_

Compare using <, >, or =

3 846 853                      3 846 795

3 825 455                      3 846 853

3 846 853                      3 837 246

3 836 457                      3 846 853

3 846 853                      3 846 482

3 846 853

+ 1000

3 846 853

+ 10 000

3 846 853

+ 1 000 000

3 846 853

- 100 000

3 846 853

- 1 000 000

## Comparing Numbers

3 218 625, 4 335 251, 3 118 323, 3 734 482

Least to Greatest

3 118 323, 3 218 625, 3 734 482, 4 335 251

3 245 871, 3 189 784, 4 324 845, 2 189 218

Greatest to Least

4 324 845, 3 245 871, 3 189 784, 2 189 218

**Part 1** Order the numbers below from least to greatest

1 456 789, 1 148 982, 1 151 658

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

2 694 152, 2 487 168, 2 451 874

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

4 945 254, 3 955 452, 3 715 715

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

**Part 2** Order the numbers below from greatest to least

5 314 854, 5 341 785, 5 341 235, 5 314 824

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

7 264 872, 7 298 412, 7 299 452, 6 278 258

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

8 581 775, 8 538 785, 7 581 655, 8 538 999

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Name: \_\_\_\_\_

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# 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											
Billions			Millions			Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones

2) 7 056											
Billions			Millions			Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones

3) 9 237 031 357											
Billions			Millions			Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	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

## Task Cards: Place Value

### Objective

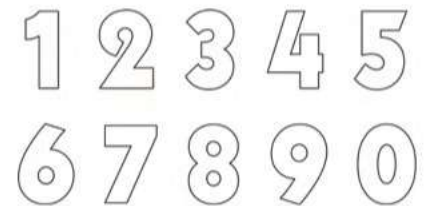
What are we learning about?

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 sheet for answers
- Pencils



### Instructions

How you will run the activity

1. Begin by explaining the concept of place value and 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 their problem-solving 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 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) 4,867,523,496  
 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:**

3,000,400,7946

- 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 18:  
 Six billion, four hundred twenty-eight million, three hundred fifty-seven thousand, one hundred

- a) 6,428,357,962  
 b) 6,428,357,962  
 c) 6,482,357,962

**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:**

4,960,200,174

- a)  $4,000,000,000 + 500,000,000 + 60,000,000 + 7,000,000 + 800,000 + 90,000 + 2,000 + 1$   
 b)  $4,000,000,000 + 500,000,000 + 60,000,000 + 7,000,000 + 90,000 + 30,000 + 200 + 1$   
 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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# Task Cards: Place Value

Answers

Record your answers below

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

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

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## Place Value Quiz

**Part 1** Fill in the place value charts below

1) 1 363 635

2) 3 352 399

M	H Th	T Th	Th	H	T	O

M	H Th	T Th	Th	H	T	O

**Part 2** What place value is the underlined number?

1) 2 132 5162) 42 6683) 4 342 6584) 3 514 2485) 42 46) 4 762 134

**Part 3** Fill in the table below

	Number	# of Millions	# of Thousands	# of Hundreds	# of Tens	# of Ones
1	3 194 325					
2	6 418 474					
3	9 873 126					

**Part 4** What is the standard form of the numbers below?

1) 4 000 000 + 300 000 + 20 000 + 7 000 + 100 + 40 + 7

2) 8 000 000 + 900 000 + 80 000 + 4 000 + 500 + 30 + 8

## Part 5

What is the expanded form of the numbers below?

1) 3 372 285

2) 7 512 383

3) 8 784 178

## Part 6

Write the standard form of the written words below

1) Four million, three hundred seventy-six thousand, two hundred and eighty-

2) Nine million, seven hundred eighty-nine thousand, two hundred seventy-four

## Part 7

Write the written form of the numbers below

1) 2 337 284

2) 5 716 517

3) 8 347 628

## Part 8

Solve the riddles

Amanda's number has:

- 2 ones
- Double the number of hundreds than ones
- Half as many thousands as ones
- 3 less hundred thousands than hundreds
- 6 millions
- Half as many ten thousands than millions
- The same number of tens than hundred thousands

Answer

## 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

9	3	1	.	6	4	2	
Thousands	Hundreds	Tens	Ones	Decimal	Tenths	Hundredths	Thousandths

**Part 1** Write the name of the place value for the underlined number?

1) 7 72 <u>8</u> .122	2) 4 3 <u>4</u> .27	3) 4 35 <u>2</u> .427	4) 1 713.68 <u>8</u>
5) 6 412. <u>4</u> 33	6) 2 45 <u>4</u> .72	7) <u>9</u> 26	8) 4 <u>3</u> 57.926
9) 2 364.52 <u>1</u>	10) 7 247.7 <u>1</u> 1	11) <u>2</u> 57	12) 2 4 <u>7</u> 9.542

**Part 2** Fill in the place value table for the numbers below

1) 5 731.538							
Thousands	Hundreds	Tens	Ones	Decimal	Tenths	Hundredths	Thousandths

2) 3 272.319							
Thousands	Hundreds	Tens	Ones	Decimal	Tenths	Hundredths	Thousandths



# Rounding Decimal Numbers - Nearest Tenth

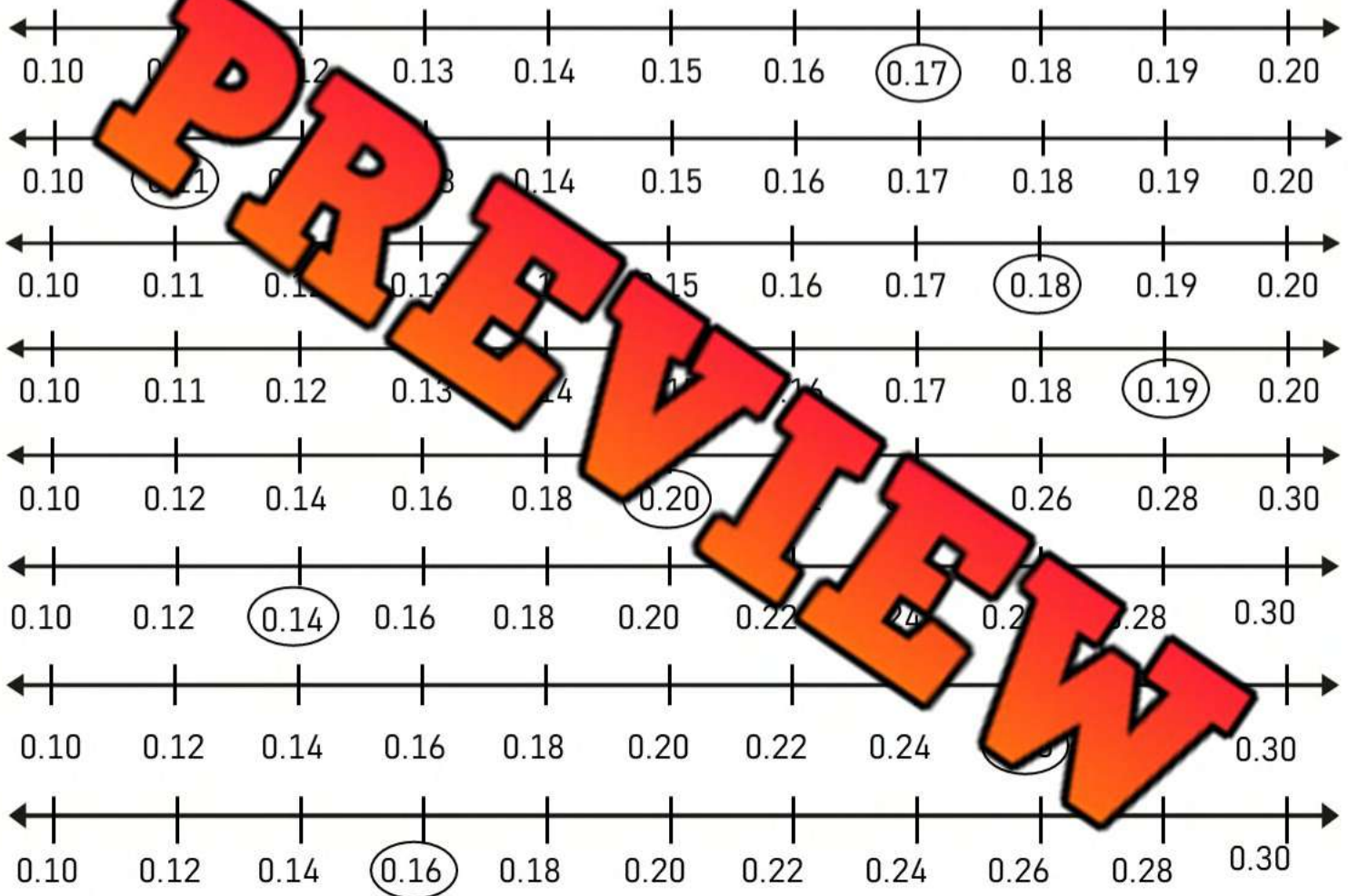
Round Down

Round Up



## Part 1

Round the decimal number to the nearest tenth. Circle the answer.



## Part 2

Answer the word problems below

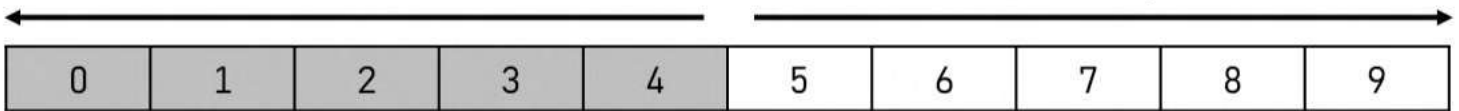
- Jordan threw a javelin 27.93m. Round his throw to the nearest tenth.
- A candy bar weighs 84.54 grams. Round how heavy the bar is to the nearest tenth.



## Rounding Decimal Numbers to the Nearest Tenth

Round Down

Round Up



Rounding to the nearest tenth

$$0.73 \rightarrow 0.7$$

$$24.45 \rightarrow 24.5$$

**Part 1** Round the following decimal numbers to the nearest tenth

1) 0.41 → _____	2) 0.28 → _____	3) 0.32 → _____
4) 0.68 → _____	5) 0.55 → _____	6) 0.94 → _____
7) 0.86 → _____	8) 0.63 → _____	9) 0.76 → _____

**Part 2** Round the following decimal numbers to the nearest tenth

1) 3.61 → _____	2) 4.18 → _____	3) 8.35 → _____
4) 5.24 → _____	5) 3.42 → _____	6) 11.59 → _____
7) 14.37 → _____	8) 12.73 → _____	9) 15.95 → _____
10) 22.43 → _____	11) 41.58 → _____	12) 36.39 → _____
13) 48.41 → _____	14) 51.84 → _____	15) 82.27 → _____

## Rounding Decimal Numbers - Nearest Hundredths

Round Down

Round Up



Rounding to the nearest hundredth

$$0.753 \rightarrow 0.75$$

$$22.745 \rightarrow 22.75$$

**Part 1** Round the following decimal number to the nearest hundredth

1) 0.615 → _____	2) 0.741 → _____	3) 0.238 → _____
4) 0.393 → _____	5) 0.456 → _____	6) 0.296 → _____
7) 0.248 → _____	8) 0.939 → _____	9) 0.997 → _____

**Part 2** Round the following decimal numbers to the nearest hundredth

1) 3.604 → _____	2) 4.538 → _____	3) 2.711 → _____
4) 7.407 → _____	5) 6.148 → _____	6) 9.626 → _____
7) 11.284 → _____	8) 16.932 → _____	9) 21.263 → _____
10) 27.968 → _____	11) 33.820 → _____	12) 47.427 → _____
13) 58.749 → _____	14) 64.289 → _____	15) 89.599 → _____

# Comparing Decimals – Different Place Values




**Part 1**

Compare the following numbers:

1) 0.15 <input type="text"/> 0.112	6) 2.56 <input type="text"/> 2.1
2) <input type="text"/> 0.321	7) 5.84 <input type="text"/> 5.822
3) 0.19 <input type="text"/>	8) 8.96 <input type="text"/> 8.992
4) 0.457 <input type="text"/>	<input type="text"/> 11.52 <input type="text"/> 11.247
5) 0.571 <input type="text"/> 0.59	10) 15 <input type="text"/> 15.32

**Part 2**

Answer the word problems below:

- 1) Joe makes 0.412 three-pointers he takes. Adam makes 0.4 three-pointers he shoots. If they both took 100 three pointers, who would make more?  

- 2) Willow and Stella measure the length of their pencils. Willow's pencil is 12.531cm long and Stella's pencil is 12.54cm long. Whose pencil is longer?  

- 3) It took Jayden 14.386 seconds to run 100m. Luke ran the 100m race in 14.39 seconds. Who ran it faster?  


## Exit Cards

Cut Out

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

Name: \_\_\_\_\_

Compare the following numbers

1)  0.2122)  0.452  0.4213)  0.602  0.614)  0.451  0.455)  0.871  0.901

Name: \_\_\_\_\_

Compare the following numbers

1)  0.25  0.2122)  0.452  0.4213)  0.602  0.614)  0.451  0.455)  0.871  0.901

Name: \_\_\_\_\_

Compare the following numbers

1)  0.25  0.2122)  0.452  0.4213)  0.602  0.614)  0.451  0.455)  0.871  0.901

Name: \_\_\_\_\_

Compare the following numbers

1)  0.25  0.2122)  0.452  0.4213)  0.602  0.614)  0.451  0.455)  0.871  0.901

# Ordering Decimals

0.2721, 0.1215, 0.5487, 0.9232  
Least to Greatest  
0.1215, 0.2721, 0.5487, 0.9232

5.2242, 0.3263, 6.9317, 8.5229  
Greatest to Least  
8.5229, 6.9317, 5.2242, 0.3263

## Part 1

Order the numbers below from least to greatest

1) 0.553, 0.121, 0.357, 0.113

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

2) 0.427, 0.159, 0.428, 0.406

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

3) 0.641, 0.512, 0.642, 0.511

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

4) 1.454, 2.426, 1.408, 2.616

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

5) 11.464, 11.483, 24.265, 24.612

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

6) 51.114, 51.128, 51.113

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

## Part 2

Order the numbers below from greatest to least

1) 0.625, 0.661, 0.673, 0.612

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

2) 0.332, 0.338, 0.331, 0.338

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

3) 1.413, 1.659, 1.873, 1.942

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

4) 2.122, 2.181, 1.115, 1.362

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

5) 14.251, 14.229, 14.396, 14.238

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

6) 19.722, 19.662, 19.641, 19.637

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

## Quiz - Decimals

### Part 1

Fill in the place value table for the numbers below

1) 7 235.426

Thousands	Hundreds	Tens	Ones	Decimal	Tenths	Hundredths	Thousandths

2) 3 814.678

Thousands	Hundreds	Tens	Ones	Decimal	Tenths	Hundredths	Thousandths

### Part 2

What is the place value for the underlined number?

1) 7 72 <u>8</u> .122	2) 1 5 <u>6</u> 3.42	3) 8 <u>4</u> 27	4) 1 713.6 <u>8</u> 8
5) 6 412. <u>4</u> 33	6) 2 45 <u>4</u> .723	7) 8 <u>6</u> 7	8) 4 357.92 <u>6</u>

### Part 3

Round the decimal number to the nearest hundredth

1) 0.425 → _____	2) 0.859 → _____	3) 0.259 → _____
4) 0.568 → _____	5) 0.237 → _____	6) 0.127 → _____
7) 4.291 → _____	8) 7.124 → _____	9) 12.313 → _____

## Part 4

Order the numbers below from least to greatest

1) 0.223, 0.29, 0.45, 0.413

\_\_\_\_\_

2) 0.427, 0.42, 0.288, 0.36

\_\_\_\_\_

3) 0.24, 0.44, 0.47

\_\_\_\_\_

4) 1.554, 1.41, 1.56, 1.596

\_\_\_\_\_

## Part 5

Answer the problem now

1) Reilly makes 0.425 three-pointers per game. Carlos makes 0.42 three pointers he shoots. Who is the better three-point shooter?



2) Nicole's watch weighs 29.398 grams and Ashley's watch weighs 29.39 grams. Who has the heavier watch?



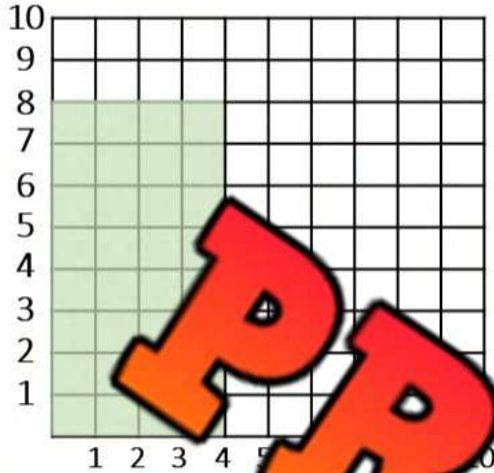
3) Megan threw the shot put 7.302 metres and Jill threw it 7.099 metres. Who threw the shot put further?



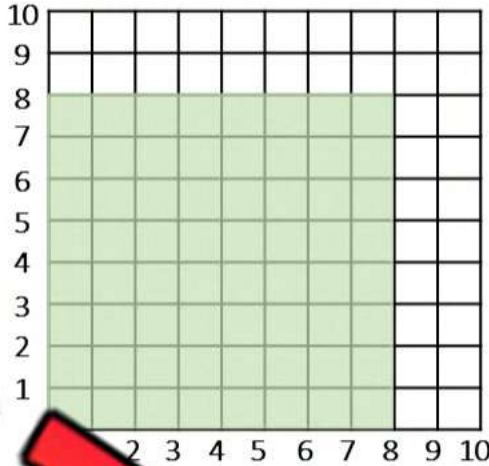
# Multiplication - Arrays

**Questions**

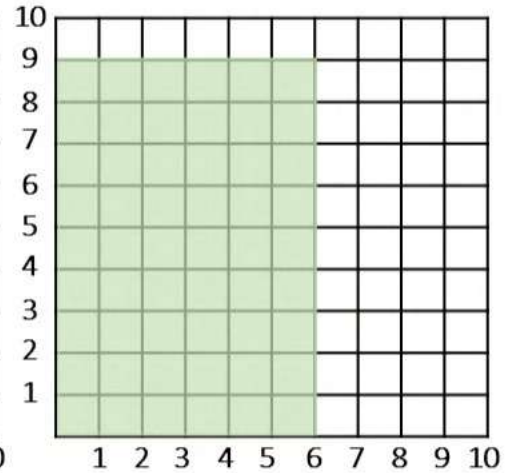
How much is shaded in? Answer the questions below



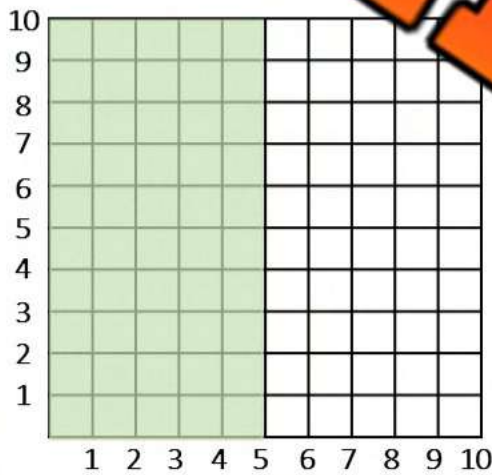
$8 \times 4 = \underline{\quad}$



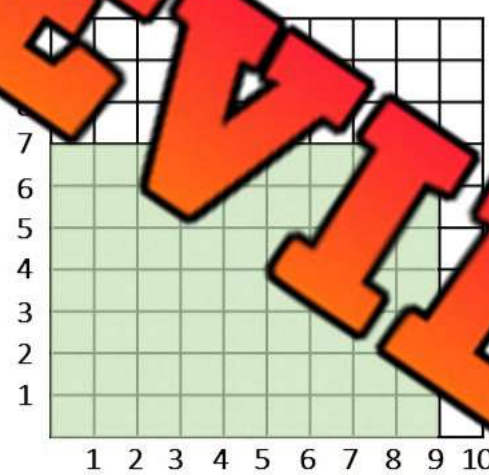
$8 = \underline{\quad}$



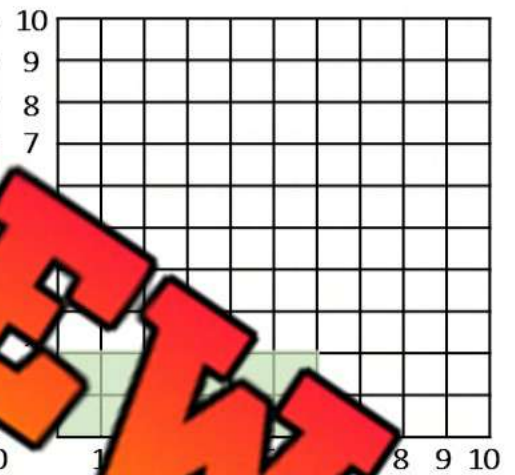
$9 \times 6 = \underline{\quad}$



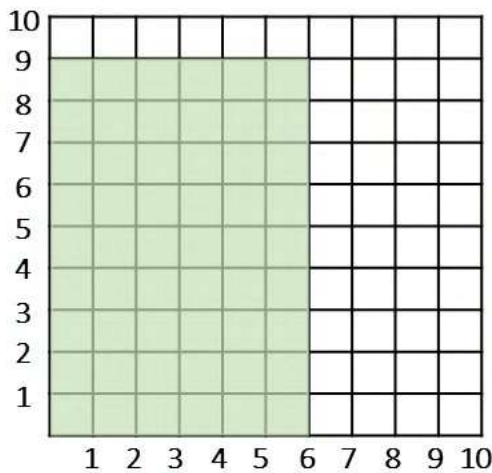
$10 \times 5 = \underline{\quad}$



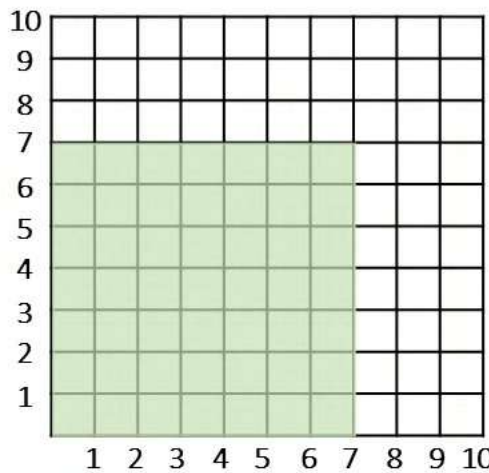
$7 \times 9 = \underline{\quad}$



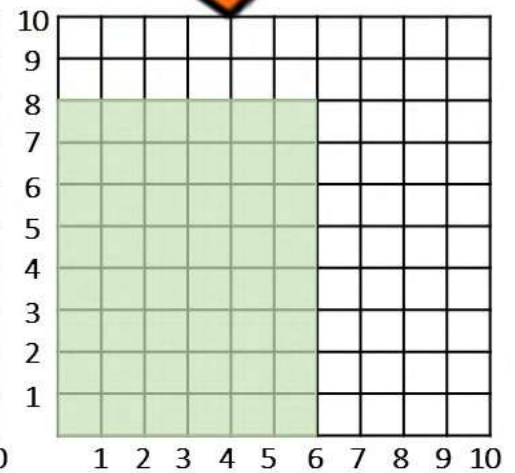
$2 \times 10 = \underline{\quad}$



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



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

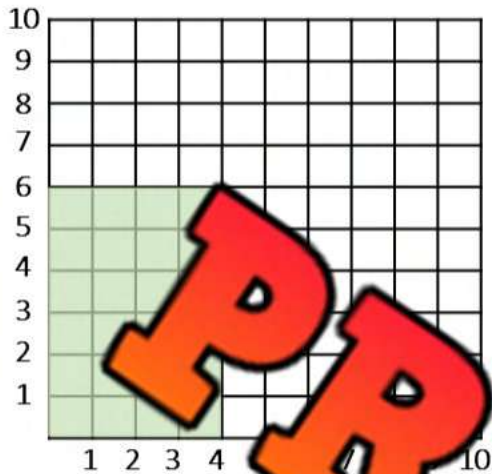


$8 \times 6 = \underline{\quad}$

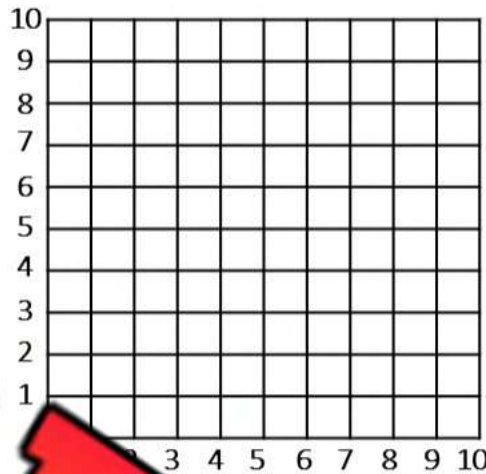
# Multiplication - Arrays

**Questions**

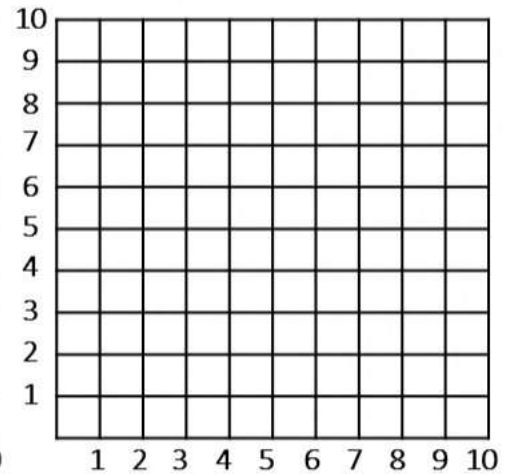
Shade in the arrays using the table. Answer the questions below



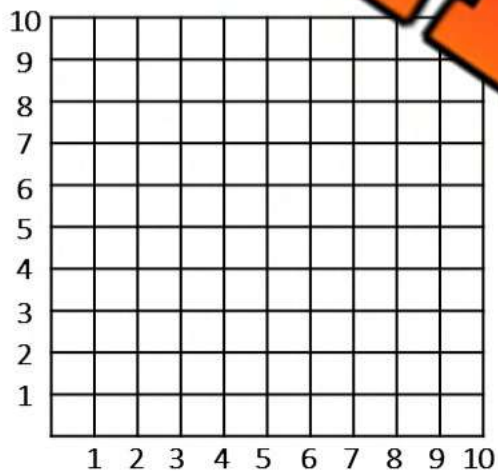
$6 \times 4 = \underline{\quad}$



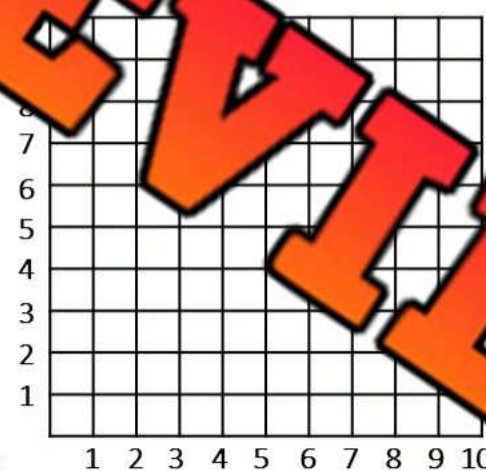
$7 \times 7 = \underline{\quad}$



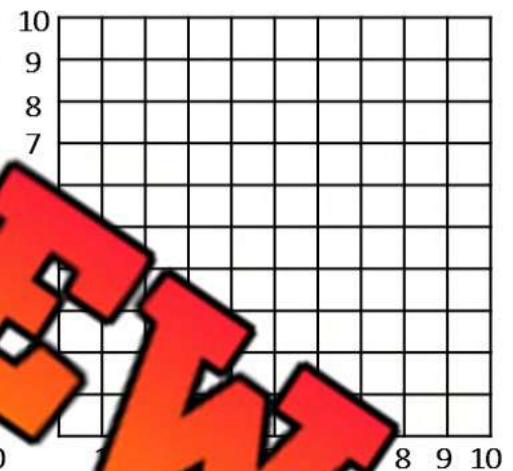
$7 \times 8 = \underline{\quad}$



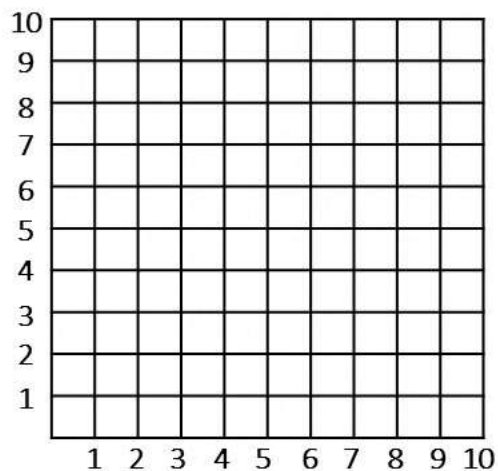
$4 \times 7 = \underline{\quad}$



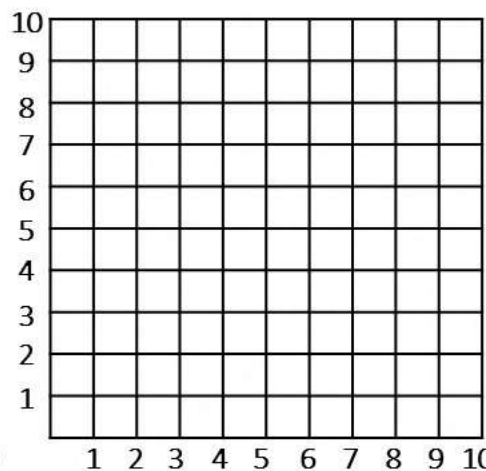
$9 \times 3 = \underline{\quad}$



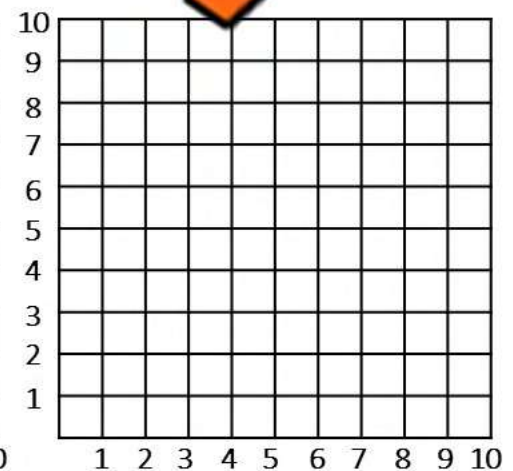
$7 \times 9 = \underline{\quad}$



$6 \times 5 = \underline{\quad}$



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



$9 \times 5 = \underline{\quad}$

# 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



$$6 \times 4$$

$$7 \times 5$$

$$4 \times 3$$

$$9 \times 6$$

$$8 \times 8$$

$$8 \times 7$$

$$9 \times 9$$

**PREVIEW**

**Mental Math - Multiplication - Breaking Up Numbers****Directions**

- 1) Break up one of the numbers into friendlier numbers (two-digit number into one)
- 2) Multiply the other number by the two friendlier numbers
- 3) Add the two answers together

**Example**

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



$18 \times 6$

$16 \times 7$

$15 \times 8$

$19 \times 6$

$17 \times 9$

$16 \times 6$



# 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)  $13 \times 2$

2)  $18 \times 6$

Name: \_\_\_\_\_

## Multiplication – Doubling and Halving

1)  $13 \times 10$

2)  $18 \times 6$

Name: \_\_\_\_\_

## Multiplication – Doubling and Halving

1)  $13 \times 10$

2)  $18 \times 6$

Name: \_\_\_\_\_

## Multiplication – Doubling and Halving

1)  $13 \times 10$

2)  $18 \times 6$

**PREVIEW**

Name: \_\_\_\_\_

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# Multiplication Drills – 5s and 6s

Questions

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

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**PREVIEW**

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

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

$$\begin{array}{r} 2 \\ \times 6 \\ \hline \end{array}$$

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

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

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

$$\begin{array}{r} 9 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 6 \\ \hline \end{array}$$

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

$$\begin{array}{r} 5 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 2 \\ \hline \end{array}$$

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

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

$$\begin{array}{r} 2 \\ \times 5 \\ \hline \end{array}$$

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

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

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

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

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

$$\begin{array}{r} 8 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 6 \\ \hline \end{array}$$

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

$$\begin{array}{r} 6 \\ \times 5 \\ \hline \end{array}$$

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

$$\begin{array}{r} 0 \\ \times 6 \\ \hline \end{array}$$

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

$$\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$$

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

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

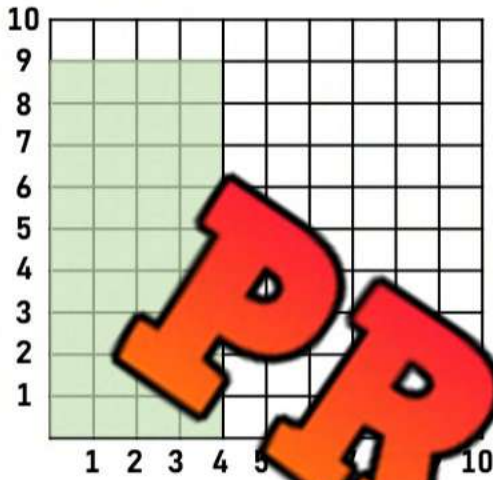
$$\begin{array}{r} 2 \\ \times 5 \\ \hline \end{array}$$

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

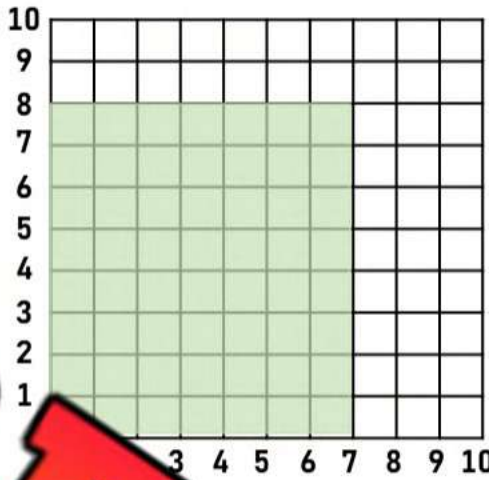
# Division - Arrays

## Questions

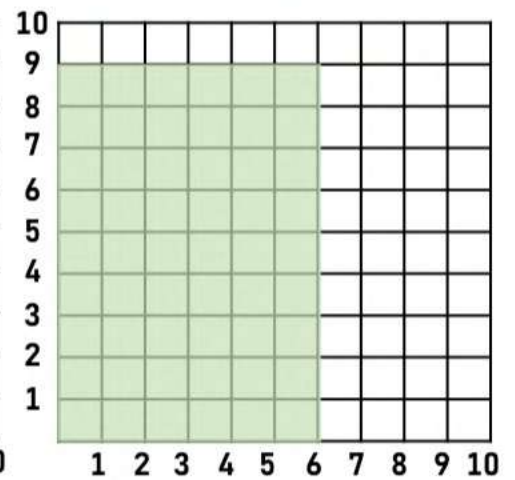
How is the shaded in area divided?



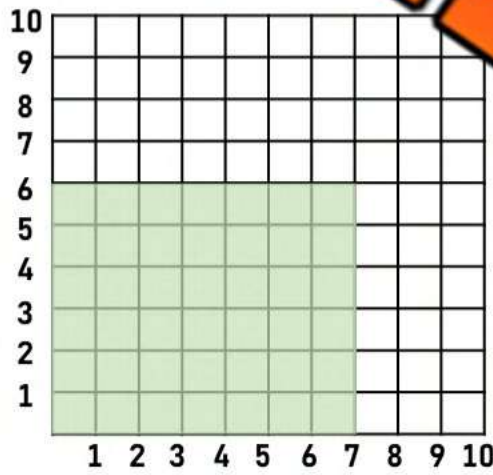
$$36 \div 4 = \underline{\quad}$$



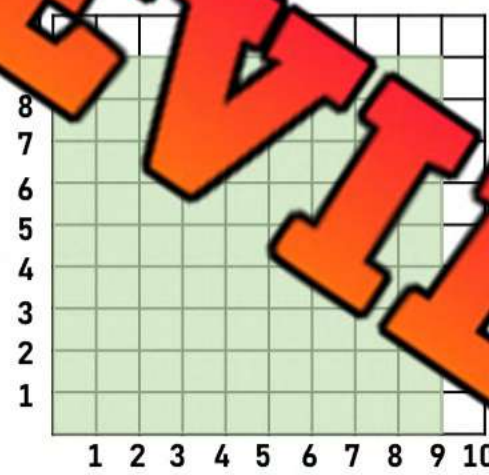
$$49 \div 7 = \underline{\quad}$$



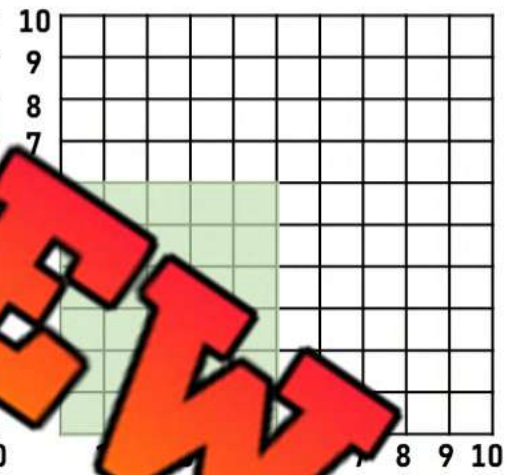
$$54 \div 6 = \underline{\quad}$$



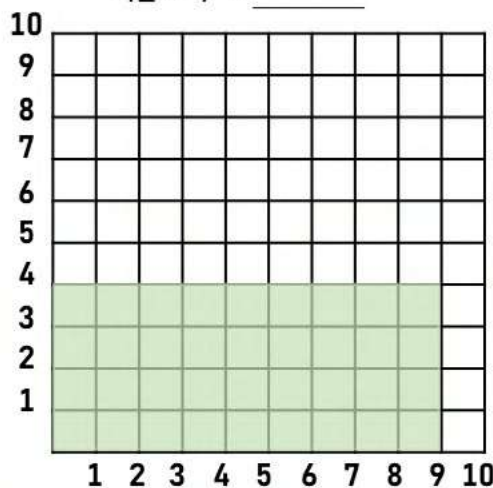
$$42 \div 7 = \underline{\quad}$$



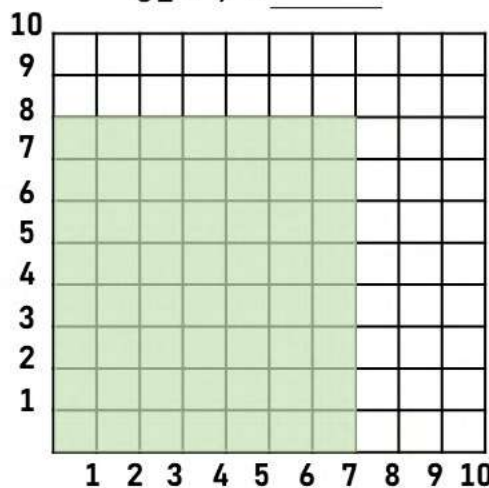
$$81 \div 9 = \underline{\quad}$$



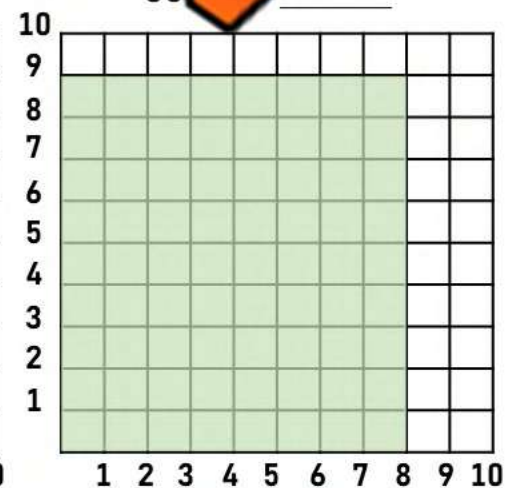
$$30 \div 6 = \underline{\quad}$$



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



$$56 \div 7 = \underline{\quad}$$

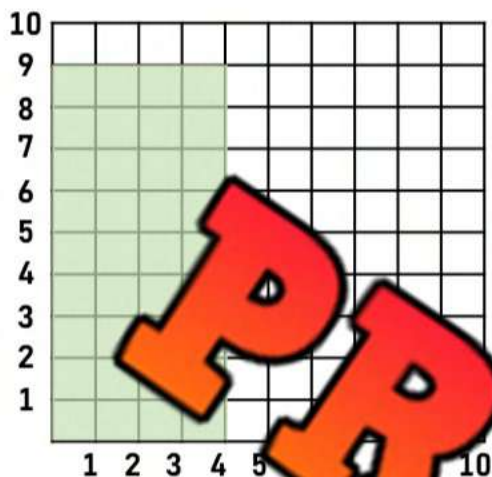


$$72 \div 9 = \underline{\quad}$$

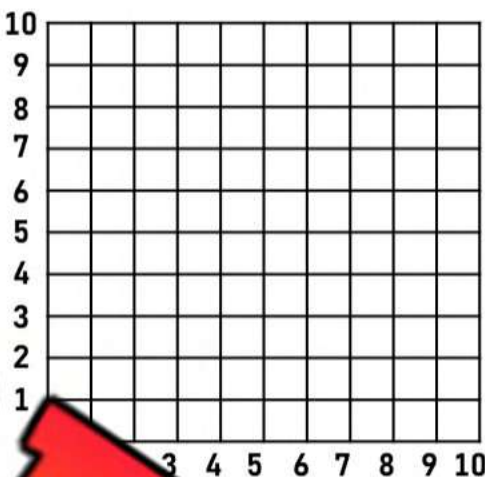
# Division - Arrays

**Instructions**

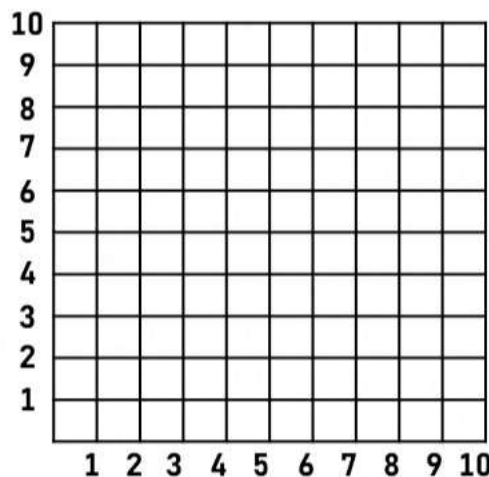
Shade in the arrays using the table. Answer the questions below



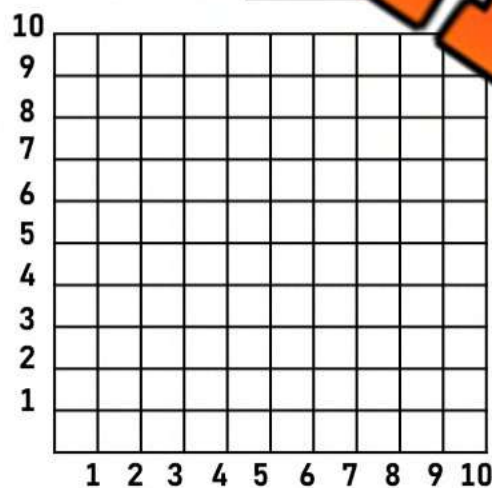
$36 \div 4 = \underline{\quad}$



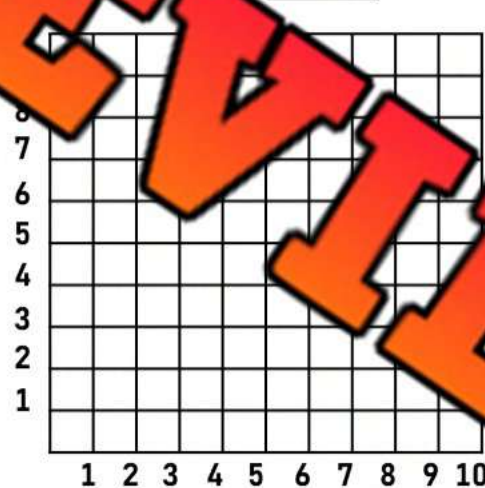
$7 = \underline{\quad}$



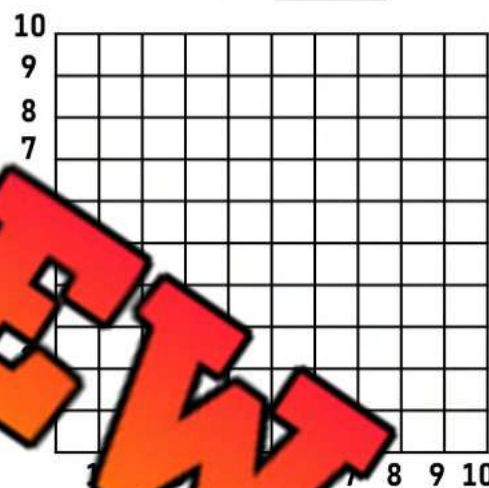
$54 \div 6 = \underline{\quad}$



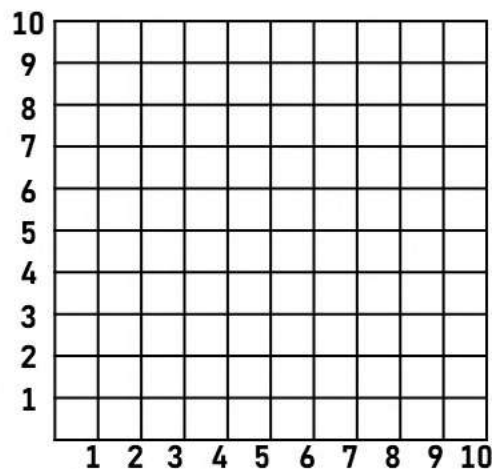
$48 \div 8 = \underline{\quad}$



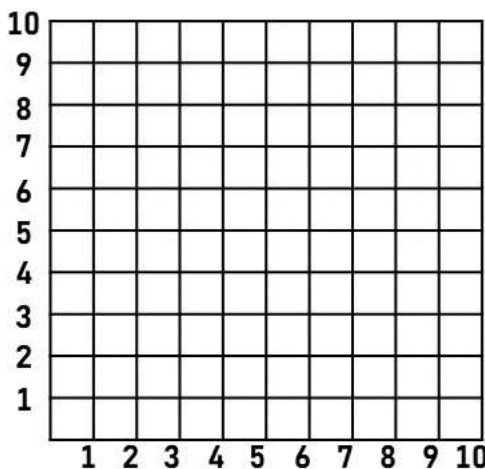
$90 \div 10 = \underline{\quad}$



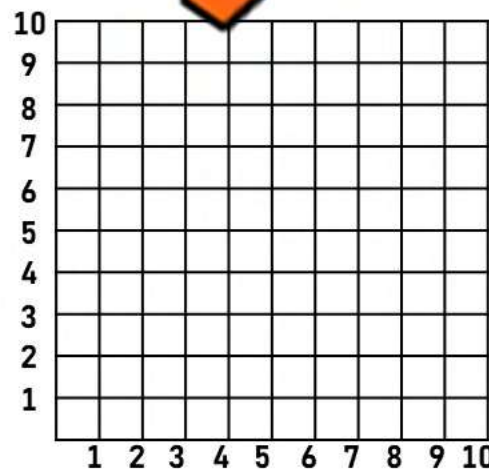
$28 = \underline{\quad}$



$18 \div 3 = \underline{\quad}$



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



$40 \div 5 = \underline{\quad}$

Name: \_\_\_\_\_

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## Division Facts – 7, 8, and 9

**Instructions**

Solve the division equations below

$\div 7$	$\div 8$	$\div 9$
$7 \div 7 =$	$8 \div 8 =$	$9 \div 9 =$
	$16 \div 8 =$	$18 \div 9 =$
$21 \div 7 =$	$24 \div 8 =$	$27 \div 9 =$
$28 \div 7 =$	$32 \div 8 =$	$36 \div 9 =$
$35 \div 7 =$	$40 \div 8 =$	$45 \div 9 =$
$42 \div 7 =$	$48 \div 8 =$	$54 \div 9 =$
$49 \div 7 =$	$56 \div 8 =$	$63 \div 9 =$
$56 \div 7 =$	$64 \div 8 =$	$72 \div 9 =$
$63 \div 7 =$	$72 \div 8 =$	$81 \div 9 =$
$70 \div 7 =$	$80 \div 8 =$	$90 \div 9 =$

**PREVIEW**

## 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.

### Materials

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 desks).
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: \_\_\_\_\_

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Math Cards

Cut out the math cards below

$10 \times 220$

$700 \div 10$

**PREVIEW**

$300 \div 3$

$5 \times 300$

$300 \div 5$

$10 \times 240$

$900 \div 10$

$2 \times 500$

$800 \div 2$

Name: \_\_\_\_\_

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Math Cards

Cut out the math cards below

$$5 \times 320$$

$$100 \div 5$$

$$10 \times 360$$

$$420 \div 10$$

$$2 \times 550$$

$$700 \div 2$$

$$5 \times 350$$

$$600 \div 10$$

$$10 \times 280$$

$$850 \div 10$$

**PREVIEW**

# 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**

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$85 \div 5$

$72 \div 4$

$84 \div 6$

$105 \div 5$

$105 \div 7$

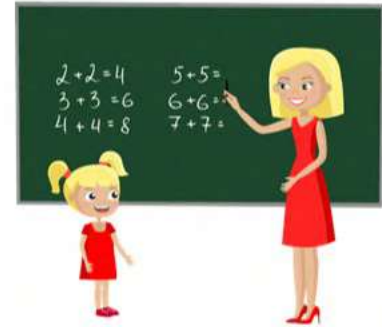
$112 \div 8$

$114 \div 6$

## 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

$$\begin{array}{r}
 144 \div 6 = 24 \\
 60 \div 6 = 10 \\
 60 \div 6 = 10 \\
 24 \div 6 = 4
 \end{array}$$

$72$

$68 \div 4$

$150 \div 6$

$120 \div 4$

$208 \div 8$

$189 \div 7$

$198 \div 6$

# 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

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)  $225 \div 9$

**PREVIEW**

**Division Practice – 1 and 2****Questions**

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

---

36

$\begin{array}{r} 2 \\ \div 1 \end{array}$	$\begin{array}{r} 4 \\ \div 2 \end{array}$	$\begin{array}{r} 8 \\ \div 2 \end{array}$	$\begin{array}{r} 5 \\ \div 1 \end{array}$	$\begin{array}{r} 2 \\ \div 2 \end{array}$	$\begin{array}{r} 2 \\ \div 1 \end{array}$
$\begin{array}{r} 12 \\ \div 2 \end{array}$	$\begin{array}{r} 14 \\ \div 2 \end{array}$	$\begin{array}{r} 8 \\ \div 1 \end{array}$	$\begin{array}{r} 2 \\ \div 1 \end{array}$		
$\begin{array}{r} 9 \\ \div 1 \end{array}$	$\begin{array}{r} 16 \\ \div 2 \end{array}$	$\begin{array}{r} 4 \\ \div 1 \end{array}$	$\begin{array}{r} 8 \\ \div 1 \end{array}$	$\begin{array}{r} 10 \\ \div 1 \end{array}$	$\begin{array}{r} 2 \\ \div 2 \end{array}$
$\begin{array}{r} 2 \\ \div 1 \end{array}$	$\begin{array}{r} 1 \\ \div 1 \end{array}$	$\begin{array}{r} 18 \\ \div 2 \end{array}$	$\begin{array}{r} 6 \\ \div 2 \end{array}$	$\begin{array}{r} 4 \\ \div 1 \end{array}$	$\begin{array}{r} 6 \\ \div 1 \end{array}$
$\begin{array}{r} 6 \\ \div 2 \end{array}$	$\begin{array}{r} 2 \\ \div 1 \end{array}$	$\begin{array}{r} 8 \\ \div 2 \end{array}$	$\begin{array}{r} 4 \\ \div 2 \end{array}$	$\begin{array}{r} 12 \\ \div 2 \end{array}$	$\begin{array}{r} 16 \\ \div 2 \end{array}$
$\begin{array}{r} 2 \\ \div 2 \end{array}$	$\begin{array}{r} 14 \\ \div 2 \end{array}$	$\begin{array}{r} 3 \\ \div 1 \end{array}$	$\begin{array}{r} 6 \\ \div 2 \end{array}$	$\begin{array}{r} 5 \\ \div 1 \end{array}$	$\begin{array}{r} 1 \\ \div 1 \end{array}$

## 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 answers to the equations using BEDMAS

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

2)  $21 -$

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

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

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

6)  $8 \div$   $+ 3) =$

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) $(7 + 3) \times 2 =$	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) $15 \div 9 \times (2 + 1) =$

### Word Problems

Answer the word problems below

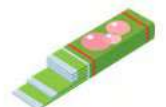
1) Lindsay ordered two slices of pizza and soda for lunch. A slice of pizza is \$2.50, and a soda is \$2.00. Lindsay did the math below. What did she do wrong?

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

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



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	$4 \times 3$	4	24
3	$0 \times (2)$	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, 8 gummies, and 5 candies. How many cents did she spend?

**Answer:**  $(2 \times 25) + (8 \times 5) + (5 \times 10) =$   
 $50 + 40 + 50 = 140$

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

# 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**



# Finding Prime and Composite Numbers

## Part 1

Follow the directions below



1) Circle the prime numbers below

11	15	7	18	3	5
12	19	33	49	52	45
		67	90	81	74

2) Circle the composite numbers below

6	12	20	13	19	25
50	43	41	46	55	21
47	54	62			63

## Part 2

Write the numbers from the pair under their respective category

	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

# Prime Number Maze

## Instructions

Help Brayden get to the park by colouring a prime number path



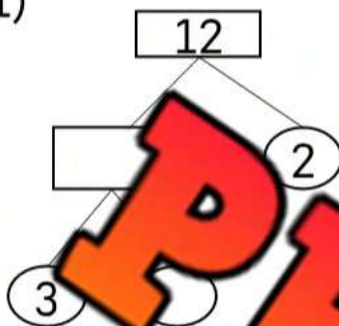
	57	28	91	81	6	39	12	55	
	12	75	18	91	48	28	42	62	
44	11	9	4	46	60	21	32	95	
75	43	51	6	78	24	51	86		
96	53	29	17	20	88	90	25	44	90
91	92	74	31	60	91	46	48	50	
65	95	46	61	38	97	53	61	66	
52	34	68	7	57	79	57	55	97	75
82	38	62	5	3	19	68			
93	50	60	86	99	90	60			

# Prime Factor Trees

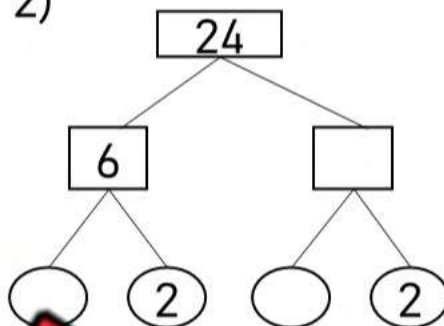
**Instructions**

Fill in the factor trees below

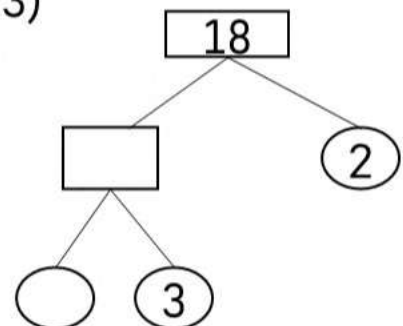
1)



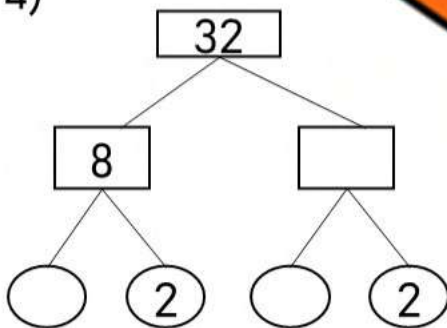
2)



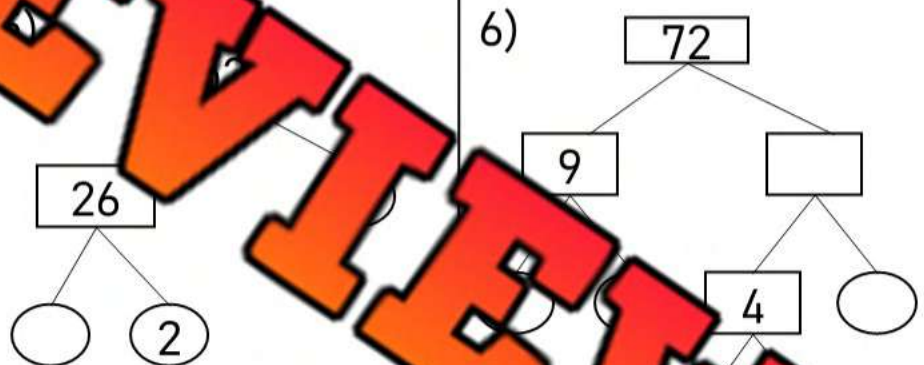
3)



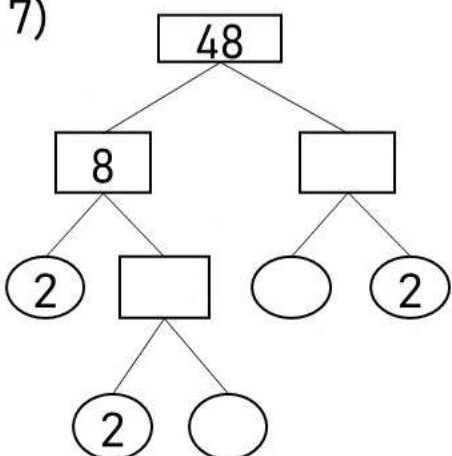
4)



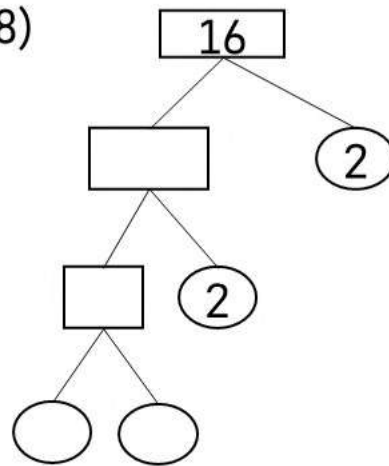
6)



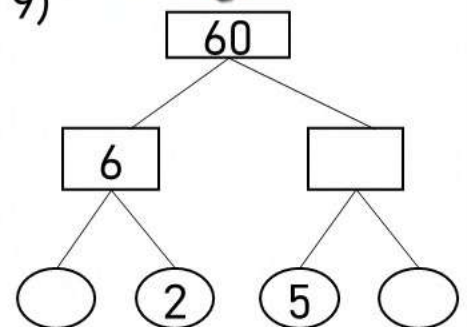
7)



8)



9)



# Prime Factor Trees



**Instructions**

Fill in the factor trees differently for the same number

1)

Equation

2)

Equation

3)

Equation

4)

Equation

**PREVIEW**

# Prime Factor Trees

**Instructions**

Fill in the factor trees differently for the same number



1)

```

    graph TD
      56[56] --- A[ ]
      56 --- B(( ))
      A --- C[ ]
      A --- D(( ))
      C --- E((2))
      C --- F(( ))
    
```

Diagram 1: A factor tree for 56. The root node is 56 in a box. It branches into an empty box and an empty circle. The empty box branches into another empty box and an empty circle. The second empty box branches into a circle containing the number 2 and another empty circle.

Equation

2)

```

    graph TD
      56[56] --- G[ ]
      56 --- H[4]
      G --- I(( ))
      G --- J((2))
      H --- K(( ))
      H --- L((2))
    
```

Diagram 2: A factor tree for 56. The root node is 56 in a box. It branches into an empty box and a box containing the number 4. The empty box branches into an empty circle and a circle containing the number 2. The box containing 4 branches into an empty circle and a circle containing the number 2.

Equation

3)

```

    graph TD
      32[32] --- M[8]
      32 --- N[4]
      M --- O(( ))
      M --- P[ ]
      P --- Q((2))
      P --- R(( ))
      N --- S(( ))
      N --- T(( ))
    
```

Diagram 3: A factor tree for 32. The root node is 32 in a box. It branches into a box containing 8 and a box containing 4. The box containing 8 branches into an empty circle and another empty box. This second empty box branches into a circle containing 2 and another empty circle. The box containing 4 branches into two empty circles.

Equation

4)

```

    graph TD
      32[32] --- U(( ))
      32 --- V[ ]
      V --- W[ ]
      V --- X((2))
      W --- Y((2))
      W --- Z[ ]
      Z --- AA(( ))
      Z --- AB(( ))
    
```

Diagram 4: A factor tree for 32. The root node is 32 in a box. It branches into an empty circle and an empty box. The empty box branches into another empty box and a circle containing 2. The second empty box branches into a circle containing 2 and another empty box. This final empty box branches into two empty circles.

Equation

**PREVIEW**

# Prime Factor Trees

**Instructions**

Draw your own factor trees below



1)

42

2)

16

3)

78

68

5)

50

6)

72

**PREVIEW**

# Exit Cards

Cut Out

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

Name: \_\_\_\_\_

Draw your own factor trees below.

84

Name: \_\_\_\_\_

Draw your own factor trees below.

84

Name: \_\_\_\_\_

Draw your own factor trees below.

84

Name: \_\_\_\_\_

Draw your own factor trees below.

84

**PREVIEW**

# Greatest Common Factor

**Instructions**

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

1)

12 \_\_\_\_\_

18 \_\_\_\_\_

GCF = 

2)

15 \_\_\_\_\_

25 \_\_\_\_\_

GCF = 

3)

35 \_\_\_\_\_

28 \_\_\_\_\_

GCF = 

4)

16 \_\_\_\_\_

4 \_\_\_\_\_

GCF = 

5)

32 \_\_\_\_\_

48 \_\_\_\_\_

GCF = 

6)

21 \_\_\_\_\_

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)	O (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, 10)
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

M LCM of 3 and 4

Y LCM of 7 and 6

O LCM of 4 and 10

I LCM of 4 and 14

N LCM of 6 and 8

A LCM of 6 and 8

What belongs to you but is used more by your friends

\_\_\_\_\_

42    20    12    63

\_\_\_\_\_

24    18    21    28

**LCM and GCF - Riddle****Instructions**

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

 E GCF of 15 and 60 R LCM of 4 and 6 S LCM of 14 and 21 A GCF of 77 and 33 P GCF of 18 and 45 T LCM of 9 and 15 I GCF of 14 and 77 M LCM of 12 and 15

If you don't keep me, I'll break. What am I?

11

9

12

45

44

7

14

15

## Divisibility Rules

We can determine whether one whole number is divisible by another without doing division. We can use the following divisibility rules:

- A number is divisible by **2** if the last digit is even (0, 2, 4, 6, or 8)
- A number is divisible by **3** if the sum of the digits is divisible by 3
- A number is divisible by **4** if the last two digits form a number divisible by 4
- A number is divisible by **5** if the last digit is 0 or 5
- A number is divisible by **6** if the number is divisible by both 2 and 3
- A number is divisible by **8** if the number formed by its last three digits is divisible by 8.
- A number is divisible by **9** if the sum of the digits is divisible by 9
- A number is divisible by **10** if the last digit is a 0

### Instruction

For each number on the left, place a checkmark under the numbers it is divisible by.

Number	2	3	4	6	8	9	10
1) 65							
2) 20							
3) 105							
4) 81							
5) 120							
6) 548							
7) 423							
8) 657							

## Divisibility Rules – 2 and 3

We can determine whether one whole number is divisible by another without doing division. We can use the following divisibility rules:

- A number is divisible by **2** if the last digit is even (0, 2, 4, 6, or 8)
- A number is divisible by **3** if the sum of the digits is divisible by 3

### Part 1 Is the number divisible by 2?

1) \_\_\_\_\_ 2) 953 \_\_\_\_\_

3) 2 682 \_\_\_\_\_ 4) 8 694 \_\_\_\_\_

### Part 2 Which number is divisible by 3?

1) 268 \_\_\_\_\_

3) 1 458 \_\_\_\_\_ 4) 428 \_\_\_\_\_

### Part 3 Which numbers are divisible by 2? Circle them.

41      58      162      247      358      55      583

685      714      805      901      1 025      1 714      2 058

### Part 4 Which numbers are divisible by 3? Circle them.

73      58      84      105      215      324      515

645      683      729      806      1358      2355      5484

# Exit Cards

**Cut Out**

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

Name: \_\_\_\_\_

Is the number divisible by 2 or 3?

	Number	Divisible by 2?	Divisible by 3?
1)	5 002		
2)	3 789		
3)	8 136		
4)	10 046		
5)	7 815		
6)	18 029		

Name: \_\_\_\_\_

Is the number divisible by 2 or 3?

	Number	Divisible by 2?	Divisible by 3?
1)	5 002		
2)	3 789		
3)	8 136		
4)	10 046		
5)	7 815		
6)	18 029		

Name: \_\_\_\_\_

Is the number divisible by 2 or 3?

	Number	Divisible by 2?	Divisible by 3?
1)	5 002		
2)	3 789		
3)	8 136		
4)	10 046		
5)	7 815		
6)	18 029		

Name: \_\_\_\_\_

Is the number divisible by 2 or 3?

	Number	Divisible by 2?	Divisible by 3?
1)	5 002		
2)	3 789		
3)	8 136		
4)	10 046		
5)	7 815		
6)	18 029		

## Divisibility Rules – Challenge

### Part 1

The number is divisible by...

<p><b>9</b></p> <p>Is divisible by...</p> <p>2 3 4 5 6 7 8 9 10</p>	<p><b>27</b></p> <p>Is divisible by...</p> <p>2 3 4 5 6 7 8 9 10</p>	<p><b>18</b></p> <p>Is divisible by...</p> <p>2 3 4 5 6 7 8 9 10</p>	<p><b>36</b></p> <p>Is divisible by...</p> <p>2 3 4 5 6 7 8 9 10</p>
<p><b>135</b></p> <p>Is divisible by...</p> <p>2 3 4 5 6 7 8 9 10</p>	<p><b>286</b></p> <p>Is divisible by...</p> <p>2 3 4 5 6 7 8 9 10</p>	<p><b>448</b></p> <p>Is divisible by...</p> <p>2 3 4 5 6 7 8 9 10</p>	<p><b>605</b></p> <p>Is divisible by...</p> <p>2 3 4 5 6 7 8 9 10</p>
<p><b>2854</b></p> <p>Is divisible by...</p> <p>2 3 4 5 6 7 8 9 10</p>	<p><b>5971</b></p> <p>Is divisible by...</p> <p>2 3 4 5 6 7 8 9 10</p>	<p><b>15912</b></p> <p>Is divisible by...</p> <p>2 3 4 5 6 7 8 9 10</p>	<p><b>22785</b></p> <p>Is divisible by...</p> <p>2 3 4 5 6 7 8 9 10</p>
<p><b>590</b></p> <p>Is divisible by...</p> <p>2 3 4 5 6 7 8 9 10</p>	<p><b>79568</b></p> <p>Is divisible by...</p> <p>2 3 4 5 6 7 8 9 10</p>		

### Part 2

Answer the word problems below.

1)	Why can a number not be divided by 0?
2)	Ben says all odd numbers are divisible by 3. Is he correct? Explain.
3)	Sarah has 193 treats to hand out to her party guests. She wants to put 9 treats in each bag. Will she have any treats left over? Explain.



# Mixed Numbers

A **mixed fraction** displays a whole number and a fraction to represent a value.

For example, if you have 2 full pizzas and  $\frac{2}{4}$  of a pizza, the mixed fraction would be:  $2\frac{2}{4}$



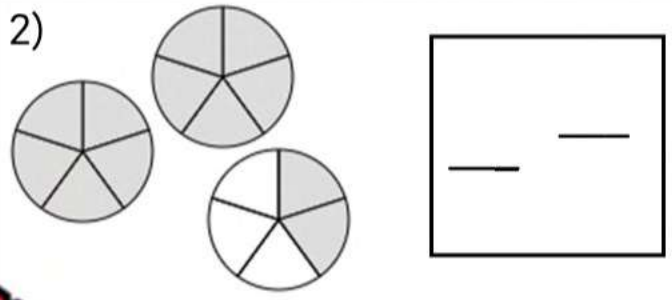
## Questions

Write the fraction beside the visual fractions

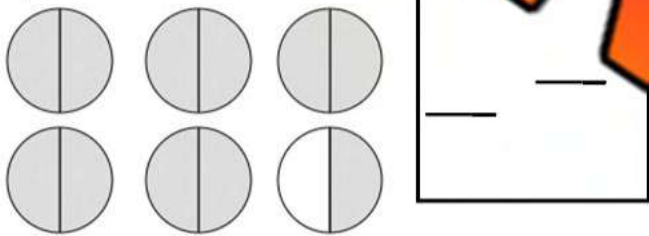
1)



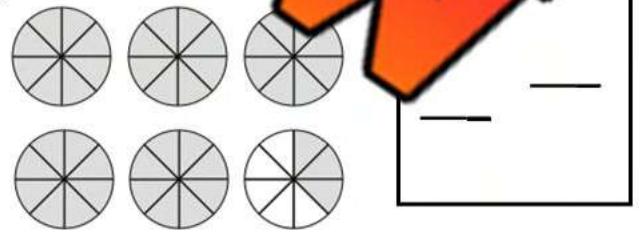
2)



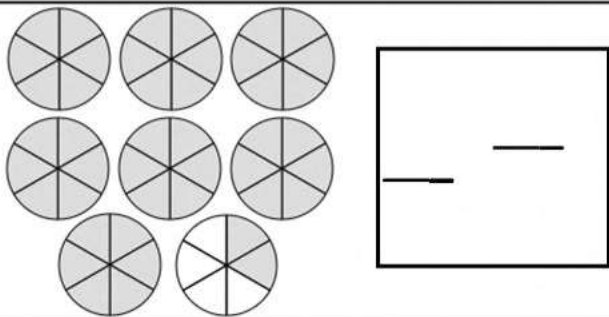
3)



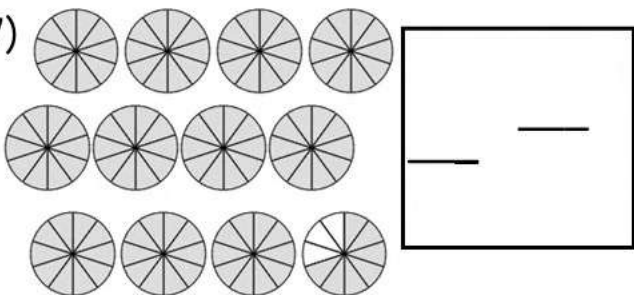
6)



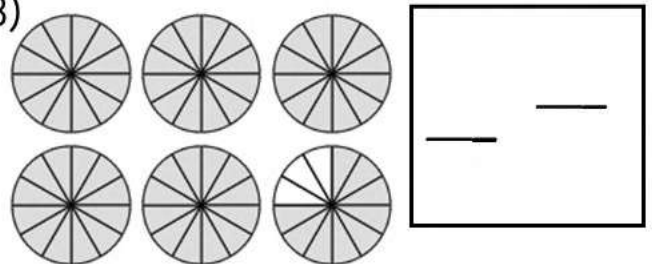
5)



7)



8)



# Mixed Numbers and Improper Fractions

## Instructions

Shade in the fractions and write the mixed number

1)



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

2)



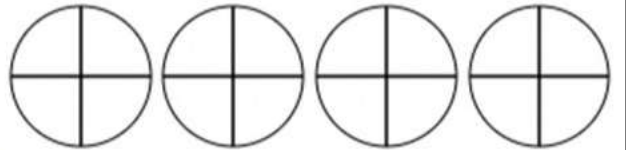
$$\frac{9}{2} =$$

3)



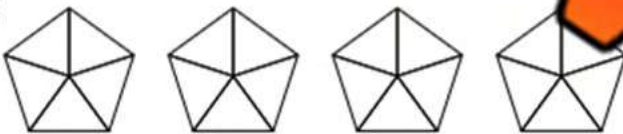
$$\frac{6}{4} =$$

4)



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

5)



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

6)



$$=$$

7)



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

8)



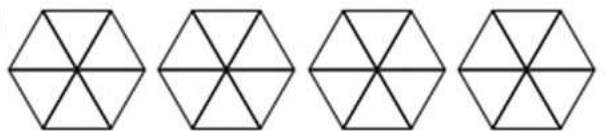
$$\frac{15}{4} =$$

9)



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

10)

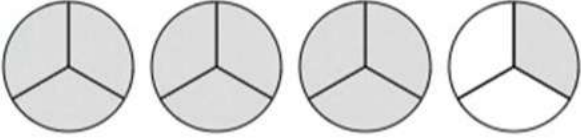
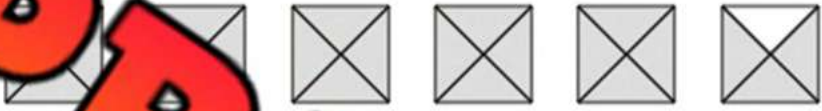



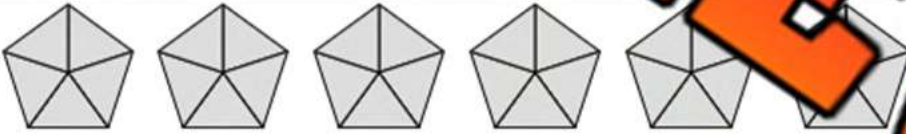
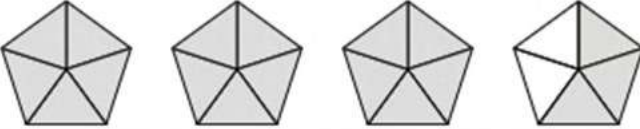

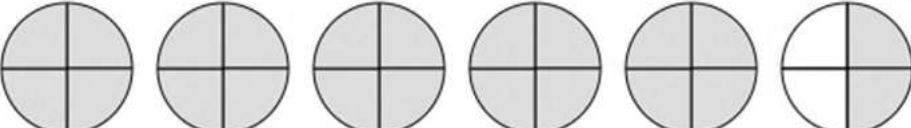
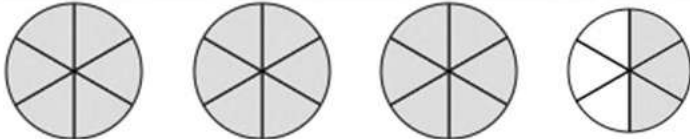


$$\frac{19}{6} =$$

## Matching The Mixed Numbers With Improper Fractions

### Instructions

Match the visual fractions with the improper fractions and mixed numbers

	Visual Fractions	Mixed Numbers and Improper Fractions
1) _____		a) $5 \frac{3}{4}$
2) _____		b) $\frac{18}{5}$
3) _____		c) $\frac{10}{3}$
4) _____		d) $4 \frac{1}{5}$
5) _____		e) $6 \frac{2}{4}$
6) _____		f) $\frac{21}{5}$
7) _____		g) $3 \frac{4}{7}$
8) _____		h) $\frac{22}{4}$
9) _____		i) $5 \frac{4}{5}$
10) _____		j) $\frac{23}{5}$

**Converting Improper Fractions to Mixed Numbers****Instructions**

Convert the improper fractions to mixed numbers

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

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

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

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

5)  $\frac{11}{2} =$

6)  $\frac{14}{3} =$

7)  $\frac{22}{4} =$

8)  $\frac{17}{6} =$

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

10)  $\frac{16}{3} =$

11)  $\frac{23}{4} =$

12)  $\frac{20}{6} =$

13)  $\frac{25}{4} =$

14)  $\frac{24}{7} =$

15)  $\frac{17}{6} =$

16)  $\frac{29}{5} =$

17)  $\frac{19}{8} =$

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

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

20)  $\frac{23}{6} =$

21)  $\frac{17}{2} =$

## Ordering Mixed Numbers

**Instructions**

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

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

4)  $8\frac{2}{6}$     $1\frac{3}{4}$     $3\frac{3}{4}$     $8\frac{3}{6}$   
\_\_\_\_\_

5)  $6\frac{2}{5}$     $6\frac{1}{5}$     $3\frac{3}{9}$     $2\frac{2}{7}$   
\_\_\_\_\_

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

7)  $6\frac{4}{8}$     $6\frac{3}{8}$     $4\frac{1}{5}$     $4\frac{3}{5}$     $6\frac{7}{8}$   
\_\_\_\_\_

8)  $8\frac{4}{6}$     $3\frac{1}{4}$     $3\frac{2}{4}$     $8\frac{3}{6}$     $1\frac{3}{4}$   
\_\_\_\_\_

## Simplifying Fractions

Fractions can be equal, which means we can write the same fraction in many different ways. The best way to write a fraction is to simplify it to its lowest form.

### How To Do It:

1. Write down the factors for both numbers.

**Example:** the number 6 has 4 factors: 6, 1, 2, 3

2. Find the greatest common factor (GCF) by circling the largest number that divides into both numbers.

3. Divide both numbers by the GCF.

### Example

$\frac{25}{100}$  - Factors: 1, 5, 25, 100  
 $\frac{100}{100}$  - Factors: 1, 2, 4, 5, 10, 20, 25, 50, 100

$$\frac{25}{100} \div 25 = \frac{1}{4}$$



### Questions

### Simplify each fraction

1)  $\frac{8}{16} = \frac{\quad}{\quad}$

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

3)  $\frac{12}{18} = \frac{\quad}{\quad}$

4)  $\frac{25}{35} = \frac{\quad}{\quad}$

5)  $\frac{36}{60} = \frac{\quad}{\quad}$

6)  $\frac{21}{35} = \frac{\quad}{\quad}$



7)  $\frac{14}{42} = \frac{\quad}{\quad}$

8)  $\frac{16}{32} = \frac{\quad}{\quad}$

# Simplifying Fractions - Matching

**Questions**

Draw a line from the fraction to its simplest form

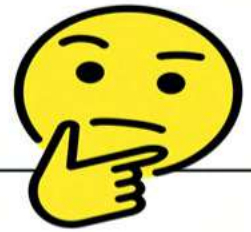
Fraction	Simplest Form
 $\frac{8}{16}$	$\frac{5}{6}$
$\frac{15}{18}$	$\frac{4}{5}$
$\frac{35}{50}$	$\frac{6}{7}$
$\frac{36}{42}$	$\frac{4}{9}$
$\frac{24}{27}$	$\frac{1}{2}$
$\frac{8}{10}$	$\frac{7}{10}$
	

**PREVIEW**

# Simplifying Fractions

**Questions**

Select the simplest terms of the fraction



1)  $\frac{10}{30}$

2)  $\frac{8}{16}$

a)  $\frac{2}{5}$

c)  $\frac{1}{3}$

a)  $\frac{1}{3}$

b)  $\frac{1}{2}$

c)  $\frac{2}{4}$

3)  $\frac{5}{28}$

4)  $\frac{15}{25}$

a)  $\frac{3}{4}$

b)  $\frac{4}{5}$

c)  $\frac{7}{9}$

a)  $\frac{3}{7}$

b)  $\frac{5}{7}$

c)  $\frac{3}{5}$

5)  $\frac{18}{24}$

6)  $\frac{9}{15}$

a)  $\frac{4}{5}$

b)  $\frac{3}{4}$

c)  $\frac{2}{3}$

a)  $\frac{4}{6}$

b)  $\frac{3}{5}$

c)  $\frac{2}{4}$

7)  $\frac{18}{32}$

8)  $\frac{12}{36}$

a)  $\frac{9}{16}$

b)  $\frac{3}{7}$

c)  $\frac{2}{5}$

a)  $\frac{2}{6}$






b)  $\frac{3}{9}$

c)  $\frac{1}{3}$

# Simplifying Fractions – Alex’s Homework

## Questions

Alex answered the questions but didn't simplify enough. Help him out!

Question	Alex's Answer	Your Answer
1) Isabella baked 30 cookies. She gave away 20 of them. What fraction of cookies did she give away? 	20/30 or 10/15	
2) Zoe earned \$60 a week selling baked goods. She earned \$15 on Friday. What fraction of her money did she earn on Friday? 	15/60 or 3/12	
3) Ethan has 18 candies. 6 are blue and 12 are green. What fraction of the candies are blue? 	6/18 or 1/3	
4) A canteen sold 64 drinks today. They sold 24 sport drinks. What fraction of drinks were sport drinks? 	24/64 or 12/32	
5) Ella scored 16 points in her basketball game. Her team scored a total of 36 points. What fraction of total points did Ella score? 	16/36 or 8/18	

# Ratio

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

Example



The ratio of apples to bananas is 1:7. For every apple you have, you have 7 bananas.

## Questions

Write the ratios for the questions below



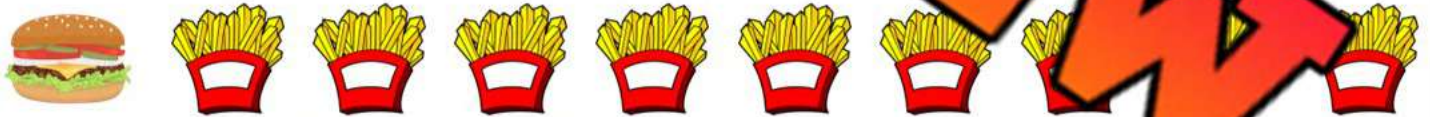
The ratio of cookie to cake is \_\_\_\_\_ : \_\_\_\_\_



The ratio of tomato to onion is \_\_\_\_\_



The ratio of pizza to drink is \_\_\_\_\_ : \_\_\_\_\_



The ratio of burger to fries is \_\_\_\_\_ : \_\_\_\_\_



The ratio of pineapple to strawberries is \_\_\_\_\_ : \_\_\_\_\_



The ratio of bread to jam is \_\_\_\_\_ : \_\_\_\_\_

# Equivalent Ratios – Scaling Up and Down

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



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: Count the number of each item and write the ratio. Then write a scaled up and down equivalent ratio.

**PREVIEW**



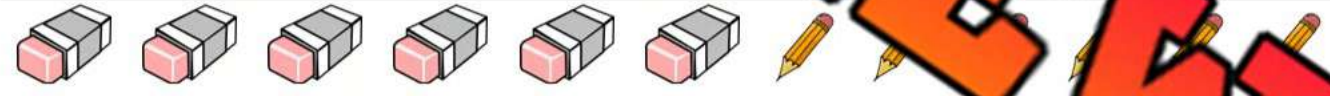
Scaled Up	Scaled Down

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	3:14	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	5:24	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 that can be paired to another equivalent ratio.
- A small table or clear floor space.



## Instructions

How you will complete the activity.

1. Divide the class into groups of 3 or 4. Give each group a set of Memory Game cards. (provided)
2. Have each group lay all the cards face down in a grid on a table.
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: \_\_\_\_\_

162

Curriculum Connection  
N.6

Cards

Memory Game Cards

72:108

6:9

30:100

4:5

75:100

2:4

90:100

9:10

70:100

7:10

**PREVIEW**

Name: \_\_\_\_\_

163

Curriculum Connection  
N.6

Cards

Memory Game Cards

45:90

5:10

**PREVIEW**

48:96

6:12

54:108

9:18

60:90

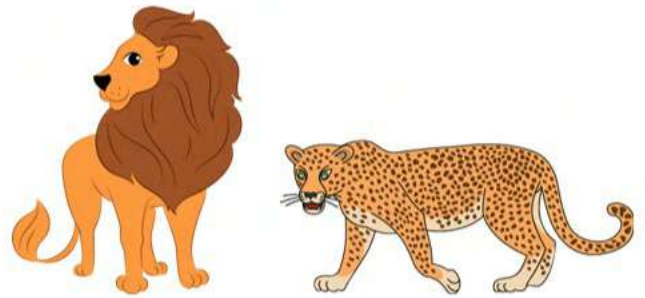
4:6

## Ratios Word Problems – At The Zoo

**Questions**

1) Draw pictures 2) Use a solution statement 3) show your thinking

1) At the zoo, the ratio of lions to leopards is 4:1. There are 6 leopards. How many lions are there?



2) At the zoo, the ratio of goats to eagles is 3:1. There are 4 eagles. How many goats are there?



3) At the zoo, the ratio of alligators to crocodiles must be 3:7. There are 9 alligators and 25 crocodiles. How many crocodiles do they need to release?



b) How many alligators could they have gotten if they didn't want to give any crocodiles away?



# Rates

A **rate** is a **comparison** between two numbers that are in **different** units. We use a colon for ratios, but we commonly use per when we describe a unit rate.

For example – John drove 200 km in 2 hours. His speed is a rate between km and hours. His unit rate is 100km per hour.

## Questions

Write the rates for the questions below

1) 8 dollars for 2 burgers

Rate =



Unit Rate = 4 dollars per burger

2) 5 dollars for 10 pencils

Rate =

Unit Rate = \_\_\_\_\_

3) 10 dollars for 10 batteries

Rate =

Unit Rate = \_\_\_\_\_

4) 6 dollars for 3 coffees



Unit Rate = \_\_\_\_\_

5) 6 dollars for 12 chocolate bars

Rate =



Unit Rate = \_\_\_\_\_

6) 2 dollars for 10 pencils

Rate =

Unit Rate = \_\_\_\_\_

7) Driving 600km in 4 hours

Rate =

Unit Rate = \_\_\_\_\_

8) Running 15km in 3 hours

Rate =

Unit Rate = \_\_\_\_\_



9) 300km on 20 litres of gas

Rate =



Unit Rate = \_\_\_\_\_

10) Growing 52cm every 4 years

Rate =

Unit Rate = \_\_\_\_\_

## Rate Word Problems – Scaling Up/Down

**Questions**

Write the rates for the questions below

1) Cory bought 20 drinks for \$10.

a) What is the unit rate?



b) If Cory bought 50 drinks, how much would it cost him?

2) Jacob drove 160 km in 4 hours.

a) What is the unit rate?



b) If Jacob drove 8 hours, how many km would he have driven?

3) On a rainy April day, it rained 27mm in 3 hours.

a) What is the unit rate?

b) If it continued to rain that hard for 9 hours, how many mm of rain would fall?



4) Brianna drove 640km and used 80 litres of gas.

a) What is the unit rate?

b) If she kept driving and used 240 litres of gas total, how many km did she drive?



## Equivalent Rates

### Multiple Choice

Circle the equivalent rates below

1) 3 burgers per person

- a) 4 burgers for 10 people
- b) 8 burgers for 12 people
- c) 15 burgers for 5 people
- d) 6 burgers for 10 people



2) 5 pencils per 5 people

- a) 5 pencils for 8 people
- b) 8 pencils for 8 people
- c) 6 pencils for 12 people
- d) 10 pencils for 15 people



3) \$1 per person

- a) \$30 for 5 people
- b) \$25 for 3 people
- c) \$20 for 2 people
- d) \$50 for 10 people

4) 30 minutes per show

- a) 40 minutes for 3 shows
- b) 90 minutes for 3 shows
- c) 60 minutes for 3 shows
- d) 120 minutes for 2 shows

5) 3 games per day

- a) 12 games in 3 days
- b) 15 games in 5 days
- c) 10 games in 2 days
- d) 6 games in 3 days



6) 4 ice cubes per drink

- a) 12 ice cubes for 2 drinks
- b) 8 ice cubes for 4 drinks
- c) 16 ice cubes for 5 drinks
- d) 6 ice cubes for 3 drinks



7) 8 minutes per book

- a) 30 minutes for 3 books
- b) 50 minutes for 4 books
- c) 20 minutes for 3 books
- d) 32 minutes for 4 books

8) 2 pillows per person

- a) 4 pillows for 4 people
- b) 8 pillows for 8 people
- c) 16 pillows for 8 people
- d) 20 pillows for 5 people

9) 7 basketballs per team

- a) 21 basketballs for 3 teams
- b) 25 basketballs for 5 teams
- c) 10 basketballs for 3 teams
- d) 16 basketballs for 2 teams



10) 5 snacks per student

- a) 9 snacks for 3 students
- b) 13 snacks for 3 students
- c) 25 snacks for 5 students
- d) 16 snacks for 4 students



# Factors, Fractions, and Ratios Quiz

## Part 1

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

48	54	13	62	75
12	41	51	55	21
	25	51	51	43

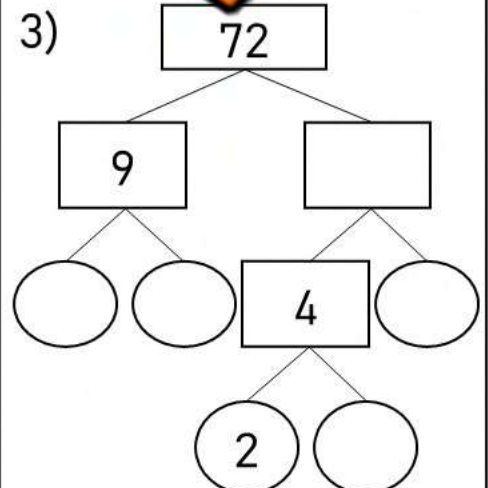
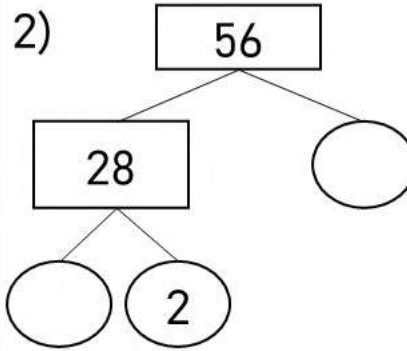
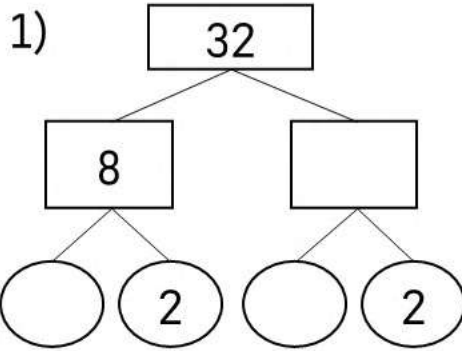
## Part 2

List all the factors for the numbers below

- 1) 12    \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_
- 2) 25    \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_
- 3) 21    \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

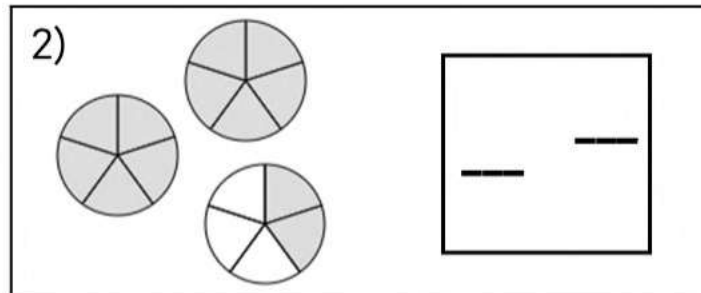
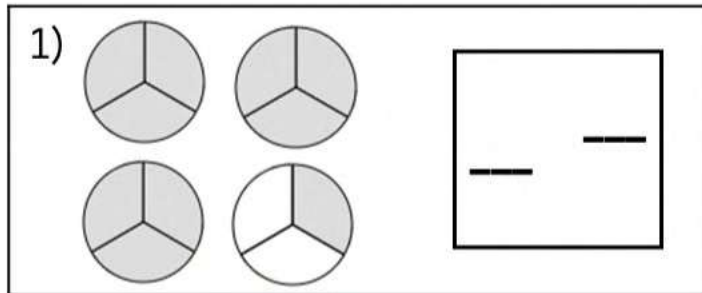
## Part 3

Fill in the factor trees below



## Part 4

Write the fraction beside the visual fractions



## Part 5

Convert the improper fractions to mixed numbers

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

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

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

## Part 6

Convert the mixed numbers to improper fractions

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

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

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

## Part 7

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

## Part 8

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 9

Circle the equivalent rates below

1) 2 burgers per person

- a) 4 burgers for 10 people
- b) 5 burgers for 10 people
- c) 15 burgers for 5 people
- d) 8 burgers for 2 people

2) 12 pencils per 4 people

- a) 4 pencils for 8 people
- b) 8 pencils for 4 people
- c) 4 pencils for 16 people
- d) 15 pencils for 5 people

3) \$15 per person

- a) \$30 for 2 people
- b) \$25 for 5 people
- c) \$20 for 4 people
- d) \$100 for 5 people

4) 20 minutes per show

- a) 40 minutes for 2 shows
- b) 90 minutes for 3 shows
- c) 60 minutes for 2 shows
- d) 80 minutes for 2 shows

5) 5 games per day

- a) 12 games in 3 days
- b) 15 games in 5 days
- c) 15 games in 3 days
- d) 6 games in 2 days

6) 6 ice cubes per 2 drinks

- a) 12 ice cubes for 6 drinks
- b) 12 ice cubes for 2 drinks
- c) 15 ice cubes for 5 drinks
- d) 6 ice cubes for 2 drinks

## Part 10

Solve the ratio/rate questions below

1) At the zoo, the ratio of lions to leopards is 5:1. There are 2 leopards. How many lions are there?

2) At the zoo, the ratio of eagles to goats is 3:5. There are 6 eagles. How many goats are there?

3) The ratio of red candies to total candies is 4:24. What percentage of candies are red?

## Part 11

Use BEDMAS to solve the questions below

1)  $2 \times (2 + 4) =$

2)  $5 + (6 - 4) =$

3)  $3 \times 4 + (12 + 8) =$

4)  $(7 + 3) - 4 =$

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

6)  $5 + 4 \div 2 \times 5 =$

## Part 12

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

1) \_\_\_\_\_  
 12 \_\_\_\_\_  
 18 \_\_\_\_\_

GCF =

2) \_\_\_\_\_  
 15 \_\_\_\_\_  
 25 \_\_\_\_\_

GCF =

## Part 13

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

1) (4, 10)2) (3, 8)3) (2, 5)

# Converting Fractions and Decimals

## Part 1

Fill in the table with the converted decimal and fraction.

Fraction	Decimal
	.10
	.20
50/100	
	.70
80/100	
	.90
100/100	

Fraction	Decimal
15/100	
	.28
36/100	
	.48
	.62
68/100	
	.82

## Part 2

Convert the following fractions and decimals.

0.22 =      /100	0.51 =      /100	0.44 =      /100	0.88 =      /100
42/100 =	66/100 =	39/100 =	97/100 =
31/100 =	72/100 =	0.81 =      /100	0.91 =      /100

# Fractions, Decimals, and Percents

**Questions**

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

Fraction	
Decimal	
Percent	

Fraction	
Decimal	
Percent	

Fraction	
Decimal	
Percent	

Fraction	
Decimal	
Percent	

Fraction	
Decimal	
Percent	

Fraction	
Decimal	
Percent	

Fraction	
Decimal	
Percent	

Fraction	
Decimal	
Percent	

Fraction	
Decimal	
Percent	

**PREVIEW**

# 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%
300/1000	0.300	%
400/1000		40.0%
500/1000		%
600/1000		60.0%
700/1000		%
800/1000	0.800	%
900/1000		%
1000/1000	1.000	%

## Part 2

Convert the following fractions, decimals and percent

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

# Exit Cards

**Cut Out**

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

Name: \_\_\_\_\_

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

Fraction	Decimal	Percent
$\frac{151}{1000}$		
$\frac{363}{1000}$		
	0.427	
	0.675	
		78.0%
		92.8%

Name: \_\_\_\_\_

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

Fraction	Decimal	Percent
$\frac{151}{1000}$		
$\frac{363}{1000}$		
	0.427	
	0.675	
		78.0%
		92.8%

Name: \_\_\_\_\_

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

Fraction	Decimal	Percent
$\frac{151}{1000}$		
$\frac{363}{1000}$		
	0.427	
	0.675	
		78.0%
		92.8%

Name: \_\_\_\_\_

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

Fraction	Decimal	Percent
$\frac{151}{1000}$		
$\frac{363}{1000}$		
	0.427	
	0.675	
		78.0%
		92.8%

## Sport Statistics – Fractions, Decimals, and Percents

### Part 1 Baseball statistics – What are these player's percentages from the 2000 season

1) Mike Trout had 200 at bats in 2020. He had  $\frac{56}{200}$  hits,  $\frac{41}{200}$  runs, and  $\frac{17}{200}$  home runs. This means for every 200 at bats, he would have 56 hits, 41 runs, and 17 home runs.

	Hits	Runs	Home Runs
Totals - Fraction	$\frac{56}{200}$	$\frac{41}{200}$	$\frac{17}{200}$
Decimal to thousandths			
Percent			

If Trout had 100 at bats, how many home runs would he have? \_\_\_\_\_

2) Mookie Betts had 300 at bats in 2020. He had  $\frac{98}{300}$  hits,  $\frac{58}{300}$  runs, and  $\frac{27}{300}$  home runs. This means for every 300 at bats, he would have 98 hits, 58 runs, and 27 home runs.

	Hits	Runs	Home Runs
Totals - Fraction	$\frac{98}{300}$	$\frac{58}{300}$	$\frac{27}{300}$
Decimal to thousandths			
Percent			

If Betts had 100 at bats, how many hits would he have? \_\_\_\_\_

### Part 2 Basketball statistics – LeBron James shooting percentages

Lebron James and the LA Lakers won a Championship title in 2020. Find his shooting percentages by filling in the table below.

	2 pointers	3 pointers
Fraction	$\frac{214}{382}$	$\frac{44}{119}$
Decimal to thousandths		
Percent		

a) If James had taken only 100 3 pointers, how many would he have made? \_\_\_\_\_

b) If James had taken 300 3 pointers, how many would he have made? \_\_\_\_\_

c) The average NBA player shoots 46% from 2 pointers. How much better is Lebron? \_\_\_\_\_%

## Mental Math – Calculating Percentages – 10%, 15%

Percentages represent a rate out of 100 in relation to a whole. Therefore, we can represent 10% as 0.10 and 15% as 0.15.

Hint – To mentally calculate 15%...

1. Determine 10% of the number
2. Find half of answer (5%)
3. Add the 5% to the 10%

**Example**

1.  $210 \times 0.10 = 21.0$
2.  $21.0 \div 2 = 10.5$
3.  $21.0 + 10.5 = 31.5$
4. Therefore  $15\%$  of  $210 = 31.5$

**SPECIAL  
OFFER**



### Instructions

	Number	0.05 (Half)	15%
1)	100	5	15
2)	200		
3)	400		
4)	500		
5)	120		
6)	180		
7)	240		
8)	310		
9)	450		
10)	680		

## Mental Math – Calculating Percentages – 25%, 50%

**Percentages** represent a rate out of 100 in relation to a whole. 50% represents half of a number and 25% is a quarter of a number.

### Steps – Calculating 50%

1. Find half of the number

### Example – 50% of 148

1. Divide the number 148 in half  
(148 ÷ 2 = 74)
2. 50% of 148 = 74

### Steps – Calculating 25%

1. Find out what 50% of the number is by halving the number
2. Halve the number one more time

### Example – 25% of 188

1.  $188 \div 2 = 94$
2.  $94 \div 2 = 47$

### Part 1

Find half of the numbers below?

- |               |               |               |
|---------------|---------------|---------------|
| 1) 24 _____   | 2) 31 _____   | 3) 76 _____   |
| 4) 128 _____  | 5) 150 _____  | 6) 212 _____  |
| 7) 264 _____  | 8) 300 _____  | 9) 410 _____  |
| 10) 550 _____ | 11) 636 _____ | 12) 844 _____ |

### Part 2

Fill in the table below

	Number	50%	25%
1)	100		
2)	200		
3)	240		
4)	164		
5)	188		
6)	264		

	Number	50%	25%
7)	348		
8)	414		
9)	560		
10)	644		
11)	828		
12)	940		

# Exit Cards

**Cut Out**

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

Name: \_\_\_\_\_

Fill in the table below

		50%	25%
1)			
2)	492		
3)	720		
4)	960		
5)	1004		
6)	1280		

Name: \_\_\_\_\_

Fill in the table below

	Number	50%	25%
1)	356		
2)	492		
3)	720		
4)	960		
5)	1004		
6)	1280		

Name: \_\_\_\_\_

Fill in the table below

	Number	50%	25%
1)	356		
2)	492		
3)	720		
4)	960		
5)	1004		
6)	1280		

Name: \_\_\_\_\_

Fill in the table below

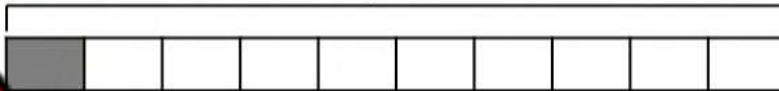
	Number	50%	25%
1)	356		
2)	492		
3)	720		
4)	960		
5)	1004		
6)	1280		

## 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 headphones. He finds a pair he likes for \$70.00 that are on sale for 15% off. How much will he save before tax?



2) Lindsay is out shopping for a new winter coat. She finds 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?



## Determining Sales Tax

To determine a 12% sales tax, we can use our knowledge of calculating 1% and 10%.



For example:

Product Price	1%	2%	10%	13%	Total Price
\$10.00	\$0.10	\$0.20	\$1.00	\$1.20	\$11.20

1% of 10.00 is \$0.10, which is 10 cents. We can multiply this by 2 to get 2%, which gives us 0.20 or 20 cents. 10% of 10.00 is 1.00 or 1 dollar. This gives us a total of \$11.20.

Questions: Use the steps above to calculate the sales tax and total price

#	Product Price	1%	2%	10%	12%	Total Price
1	\$24.00	0.24	0.48	2.40	2.40 + 0.48 \$2.88	\$26.88
2	\$17.00					
3	\$27.00					
4	\$44.00					
5	\$74.00					
6	\$68.00					

## 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 10% 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.



## Word Problems – Missing Percentages

**Questions**

What percentage is missing?

1) In a class, 63% of students take a bus to school and 14% get a drive from their parents. What percentage of students walk to school?



2) In a survey of 7 students, 23% thought math was fun and 42% thought math was boring. What percentage of students disliked math?



3) A shop sells 3 flavors of donuts. They tracked their sales last week and found out that 38% of the donuts sold were chocolate, and 21% were vanilla. What percentage of the donuts were another flavor?



4) In a candy survey, respondents were asked what candy was their favourite. They could choose from 4 different options: gum, hard candy, lollipops, or gummies. 18% chose gum, 27% chose hard candy, and 35% chose lollipops. What percentage chose gummies?



5) The Saskatchewan Ministry of Transportation studied which type of car was most popular in Saskatchewan. There were 3 options – gas, diesel, or electric. 55% used diesel and 4% used electricity. What percentage of vehicles use gas?



6) A zoo has monkeys, zebras, pandas, and snakes. Of all the animals, 23% are monkeys, 29% are zebras, and 26% are pandas. What percentage of the animals are snakes?



7) Zoe spends 3 hours on 5 social media apps each day. She spends 28% of the 3 hours on Instagram, 15% on Facebook, 22% on TikTok, and 17% on Snapchat. What percent does she spend on YouTube?



## 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



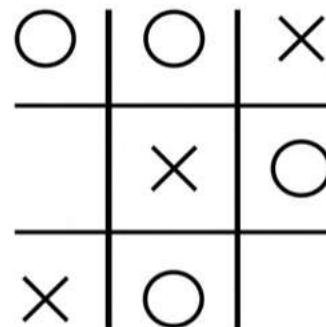
Student	Mark	Decimal	Percent	Grade
Madison				
Stella	9/100			
Matthew	9			
Eli	7/10			
John	1/2			
Kai	1/4			
Ivy	4/4			
Everly	1/5			
Bella	75/100			
Skylar	95/100			
Leah	8/10			
Roman	1/8			
Adrian	1/10			
Easton	4/5			
Savannah	77/100			

## 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.



### Material

What you will need for the activity.

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

### Instructions

How you will complete it

1. Find a partner to play the game with.
2. The goal is to solve 2 x 1 digit multiplication problems in each square 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	8 9 x	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 8	9 x 9
3 9 x 8	4 8 x 9	6 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
9 x 9	5 6 x 7	4 8 x 9
8 x 8	3 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

# Multiplication – 2 x 2 Digits

**Questions**

Use the standard algorithm to solve the multiplication problems below

	1)		
			1
x			
<hr/>			
<hr/>			

	2)		
		7	2
x		1	4
<hr/>			
<hr/>			

	3)		
		4	3
x		7	1
<hr/>			
<hr/>			

	4)		
		2	6
x		2	8
<hr/>			
<hr/>			

	5)		
		6	1
x		3	7
<hr/>			
<hr/>			

	6)		
		6	
x		2	3
<hr/>			
<hr/>			

	7)		
		6	2
x		6	2
<hr/>			
<hr/>			

	8)		
		9	8
x		6	2
<hr/>			
<hr/>			

	9)		
		8	3
x		4	6
<hr/>			
<hr/>			

	10)		
		2	9
x		3	7
<hr/>			
<hr/>			

	11)		
		3	5
x		8	2
<hr/>			
<hr/>			

	12)		
		3	3
x		7	2
<hr/>			
<hr/>			

## Multiplication – 2 x 2 Digits

### Part 1

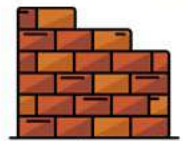
Use the standard algorithm to solve the multiplication problems below

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) $\begin{array}{r} 60 \\ \times 7 \\ \hline \end{array}$	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) $\begin{array}{r} 21 \\ \times 35 \\ \hline \end{array}$	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?



# Multiplication – 2 x 2 Digits

Step 1: Setup up the Area Model

$32 \times 17 = \underline{\quad}$

	30	2
10		
7		

Step 2: Multiply

$32 \times 17 = \underline{\quad}$

	30	2
10	$30 \times 10$ 300	$10 \times 2$ 20
7	$30 \times 7$ 210	$7 \times 2$ 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)  $32 \times 17 = \underline{\quad}$


2)  $27 \times 23 = \underline{\quad}$


3)  $45 \times 24 = \underline{\quad}$


4)  $37 \times 18 = \underline{\quad}$


5)  $82 \times 44 = \underline{\quad}$


6)  $94 \times 72 = \underline{\quad}$


# Multiplying 3-Digit by Tenths

## Part 1

Use the standard algorithm to solve the multiplication problems below

1)			
	4	5	1
x			4

2)			
	7	3	4
x		.	2

3)			
	6	0	2
x		.	7

4)			
	4	3	8
x		.	6

5)			
	2	7	9
x		.	1

6)			
	9	5	6
x		.	8

7)			
	8	2	
x		.	5

8)			
	3	7	4
x		.	9

## Part 2

Solve the word problems below

1) Joe bought 124 candies for his party. Each candy cost him \$0.2. How much did he spend on candy?



2) A fountain has 247 dimes in it. How much money is in the fountain?



## Multiplying 3-Digit by Tenths

**Part 1**

Use the standard algorithm to solve the multiplication problems below

$\begin{array}{r} 413 \\ \times .2 \\ \hline \end{array}$	$\begin{array}{r} 757 \\ \times .5 \\ \hline \end{array}$	$\begin{array}{r} 217 \\ \times .3 \\ \hline \end{array}$	$\begin{array}{r} 341 \\ \times .6 \\ \hline \end{array}$	$\begin{array}{r} 583 \\ \times .4 \\ \hline \end{array}$
$\begin{array}{r} 412 \\ \times .5 \\ \hline \end{array}$	$\begin{array}{r} 412 \\ \times .8 \\ \hline \end{array}$	$\begin{array}{r} 636 \\ \times .6 \\ \hline \end{array}$	$\begin{array}{r} 378 \\ \times .1 \\ \hline \end{array}$	$\begin{array}{r} 743 \\ \times .7 \\ \hline \end{array}$
$\begin{array}{r} 978 \\ \times .2 \\ \hline \end{array}$	$\begin{array}{r} 856 \\ \times .1 \\ \hline \end{array}$	$\begin{array}{r} 3940 \\ \times .4 \\ \hline \end{array}$		$\begin{array}{r} 715 \\ \times .4 \\ \hline \end{array}$

**Part 2**

Solve the word problems below

1) Ashley made 162 cookies for her school. Each cookie weighs 0.3kg. How much do all 162 cookies weigh in total?



2) Steve can read a page of his book in 0.7 minutes. He read 284 pages and finished his book. How many minutes did it take him to read his book?



# Multiplying 3-Digit by Tenths

Step 1: Setup up the Area Model

$$235 \times 0.3 = \underline{\hspace{2cm}}$$

200      30      5

0.3			
-----	--	--	--

Step 2: Multiply

$$235 \times 0.3 = \underline{\hspace{2cm}}$$

200      30      5

0.3	200 x 0.3 60.0	30 x 0.3 9.0	5 x 0.3 1.5
-----	-------------------	-----------------	----------------

Step 3: Add

$$235 \times 0.3 = \underline{70.5}$$

200      30      5

0.3	60.0	9.0	1.5
-----	------	-----	-----

$$60.0 + 9.0 + 1.5 = 70.5$$

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

1)  $452 \times 0.3 = \underline{\hspace{2cm}}$

--	--	--

2)  $626 \times 0.2 = \underline{\hspace{2cm}}$

--	--	--

3)  $347 \times 0.4 = \underline{\hspace{2cm}}$

--	--	--

4)  $416 \times 0.6 = \underline{\hspace{2cm}}$

--	--	--

5)  $312 \times 0.7 = \underline{\hspace{2cm}}$

--	--	--

6)  $682 \times 0.8 = \underline{\hspace{2cm}}$

--	--	--

# Multiplication – 1-Digit Multiplier

**Questions**

Use the standard algorithm to solve the multiplication problems below

1)					
	1		2	5	
x					
<hr/>					

2)					
		7	.	3	7
x					3
<hr/>					

3)					
	2	1	.	4	8
x					5
<hr/>					

4)					
	1	8	.	3	8
x					4
<hr/>					

	2	2		6	
x					
<hr/>					

6)					
	3	4	.	8	4
x					6
<hr/>					

7)					
	2	7	.	4	8
x					3
<hr/>					

8)					
	4	2	.	6	8
x					8
<hr/>					

9)					
	5	2	.	5	1
x					9
<hr/>					

# Multiplication – 1-Digit Multiplier

**Questions**

Use the standard algorithm to solve the multiplication problems below

1)

$$\begin{array}{r} 4. \ 1 \ 3 \\ \times \quad \quad \\ \hline \end{array}$$

2)

$$\begin{array}{r} 7. \ 5 \ 7 \\ \times \quad 5 \\ \hline \end{array}$$

3)

$$\begin{array}{r} 2. \ 1 \ 7 \\ \times \quad 3 \\ \hline \end{array}$$

4)

$$\begin{array}{r} 3. \ 4 \ 1 \\ \times \quad 6 \\ \hline \end{array}$$

5)

$$\begin{array}{r} 5. \ 8 \ 3 \\ \times \quad 4 \\ \hline \end{array}$$

6)

$$\begin{array}{r} 4. \ 7 \ 8 \\ \times \quad 5 \\ \hline \end{array}$$

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

9)

$$\begin{array}{r} 3. \ 7 \ 8 \\ \times \quad 1 \\ \hline \end{array}$$

10)

$$\begin{array}{r} 7. \ 4 \ 3 \\ \times \quad 7 \\ \hline \end{array}$$

11)

$$\begin{array}{r} 9 \ 7. \ 8 \\ \times \quad 2 \\ \hline \end{array}$$

12)

$$\begin{array}{r} 8 \ 5. \ 6 \\ \times \quad 1 \\ \hline \end{array}$$

13)

$$\begin{array}{r} 7 \ 3. \ 9 \\ \times \quad 9 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \ . \ 0 \ 5 \\ \times \quad 5 \ 4 \\ \hline \end{array}$$

16)

$$\begin{array}{r} 5. \ 2 \ 3 \\ \times \quad 2 \\ \hline \end{array}$$

17)

$$\begin{array}{r} 6 \ 3. \ 6 \\ \times \quad 1 \\ \hline \end{array}$$

18)

$$\begin{array}{r} 9 \ 1. \ 4 \\ \times \quad 9 \\ \hline \end{array}$$

19)

$$\begin{array}{r} 7. \ 2 \ 4 \\ \times \quad 3 \\ \hline \end{array}$$

20)

$$\begin{array}{r} 8 \ 0. \ 5 \\ \times \quad 4 \\ \hline \end{array}$$

## 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
Wages	19.35	15.75	13.40	17.65
Hours	9	7	8	6
Earnings				

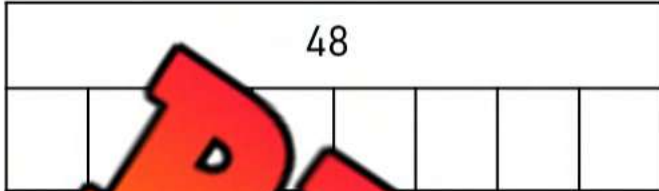
- a) Who made the most money? How much did each friend earn? Fill in the table above

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

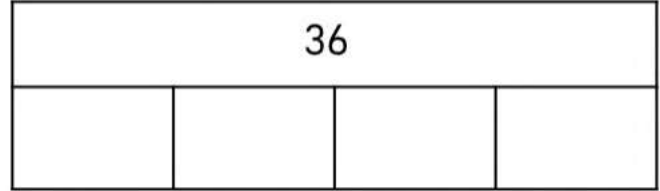
**Division – Bar Model****Questions**

Use the bar model to answer the division questions below

1)  $48 \div 8$



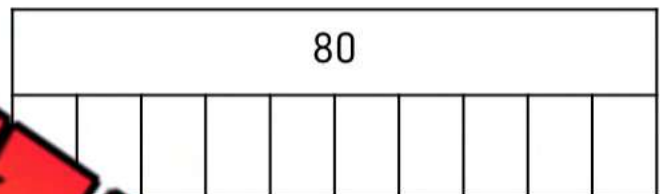
2)  $36 \div 4$



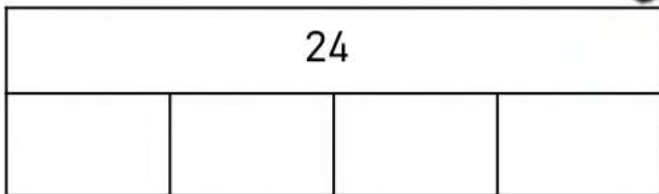
3)



4)  $80 \div 10$



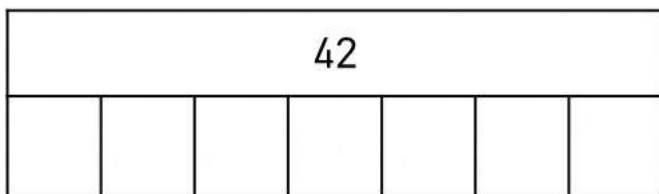
5)  $24 \div 4$



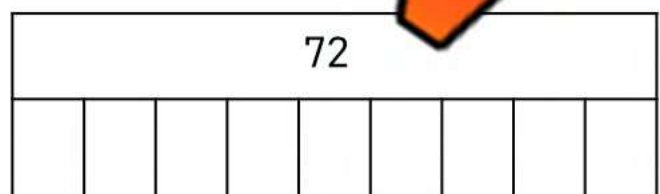
6)  $30 \div 5$



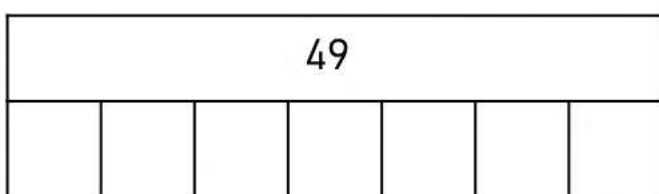
7)  $42 \div 7$



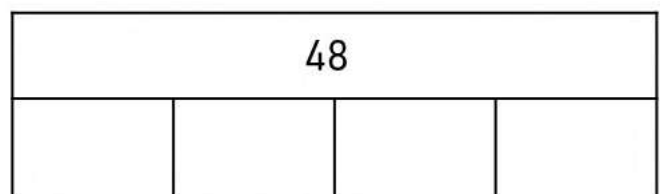
8)  $72 \div 8$



9)  $49 \div 7$



10)  $48 \div 4$



## Division – Area Model

### Questions

Use the area model to answer the division questions below

1)  $243 \div 6 = 40r3$  (16+4)

33                      7                      0

6	200 <span style="color: red;">198</span>	40 <span style="color: red;">42</span>	3 <span style="color: red;">r3</span>
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2)  $284 \div 4$

4	200	80	4
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3)  $513 \div 2$

2	500	10	3
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$428 \div 6$

6	20	8
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5)  $636 \div 6$

6	600	30	6
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6)  $778 \div 5$

5	700	70	8
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**Division – 2 by 1 – No Remainders****Questions**

How many times can you divide the bigger number by the smaller number?

1) $\begin{array}{r} \phantom{00} \\ 6 \overline{) 36} \\ \hline \end{array}$	2) $\begin{array}{r} \phantom{00} \\ 3 \overline{) 24} \\ \hline \end{array}$	3) $\begin{array}{r} \phantom{00} \\ 2 \overline{) 28} \\ \hline \end{array}$	4) $\begin{array}{r} \phantom{00} \\ 5 \overline{) 75} \\ \hline \end{array}$
5) $\begin{array}{r} \phantom{00} \\ 4 \overline{) 28} \\ \hline \end{array}$	6) $\begin{array}{r} \phantom{00} \\ 8 \overline{) 64} \\ \hline \end{array}$	7) $\begin{array}{r} \phantom{00} \\ 7 \overline{) 63} \\ \hline \end{array}$	8) $\begin{array}{r} \phantom{00} \\ 6 \overline{) 60} \\ \hline \end{array}$
9) $\begin{array}{r} \phantom{00} \\ 9 \overline{) 99} \\ \hline \end{array}$	10) $\begin{array}{r} \phantom{00} \\ 5 \overline{) 60} \\ \hline \end{array}$	11) $\begin{array}{r} \phantom{00} \\ 3 \overline{) 30} \\ \hline \end{array}$	12) $\begin{array}{r} \phantom{00} \\ 2 \overline{) 50} \\ \hline \end{array}$
13) $\begin{array}{r} \phantom{00} \\ 7 \overline{) 98} \\ \hline \end{array}$	14) $\begin{array}{r} \phantom{00} \\ 1 \overline{) 28} \\ \hline \end{array}$	15) $\begin{array}{r} \phantom{00} \\ 4 \overline{) 56} \\ \hline \end{array}$	16) $\begin{array}{r} \phantom{00} \\ 6 \overline{) 90} \\ \hline \end{array}$
17) $\begin{array}{r} \phantom{00} \\ 9 \overline{) 99} \\ \hline \end{array}$	18) $\begin{array}{r} \phantom{00} \\ 5 \overline{) 85} \\ \hline \end{array}$	19) $\begin{array}{r} \phantom{00} \\ 3 \overline{) 57} \\ \hline \end{array}$	20) $\begin{array}{r} \phantom{00} \\ 2 \overline{) 64} \\ \hline \end{array}$

**Division – 3 by 1 – With Remainders****Questions**

How many times can you divide the bigger number by the smaller number?

1)  
$$\begin{array}{r} 20 \text{ r}2 \\ 6 \overline{) 122} \end{array}$$

2)  
$$\begin{array}{r} \phantom{00} \\ 3 \overline{) 110} \end{array}$$

3)  
$$\begin{array}{r} \phantom{00} \\ 2 \overline{) 111} \end{array}$$

4)  
$$\begin{array}{r} \phantom{00} \\ 5 \overline{) 129} \end{array}$$

5)  
$$\begin{array}{r} \phantom{00} \\ 4 \overline{) 154} \end{array}$$

7)  
$$\begin{array}{r} \phantom{00} \\ 8 \overline{) 121} \end{array}$$

8)  
$$\begin{array}{r} \phantom{00} \\ 6 \overline{) 136} \end{array}$$

9)  
$$\begin{array}{r} \phantom{00} \\ 9 \overline{) 139} \end{array}$$

10)  
$$\begin{array}{r} \phantom{00} \\ 5 \overline{) 173} \end{array}$$

11)  
$$\begin{array}{r} \phantom{00} \\ 3 \overline{) 130} \end{array}$$

13)  
$$\begin{array}{r} \phantom{00} \\ 7 \overline{) 177} \end{array}$$

14)  
$$\begin{array}{r} \phantom{00} \\ 4 \overline{) 174} \end{array}$$

15)  
$$\begin{array}{r} \phantom{00} \\ 8 \overline{) 187} \end{array}$$

16)  
$$\begin{array}{r} \phantom{00} \\ 6 \overline{) 182} \end{array}$$

## 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 for 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	$2.4 \div 2 = ?$
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	

# Dividing Decimals – Removing Decimal

**Instructions**

Follow the steps to calculate the answer

1) Question	$4.24 \div 2 = ?$
Step 1 and 2	
Step 3	
Answer	
2) Question	$5.25 \div 5 = ?$
Step 1 and 2	
Step 3	
Answer	
3) Question	$40 \div 4 = ?$
Step 1 and 2	
Step 3	
Answer	
4) Question	$3.63 \div 3 = ?$
Step 1 and 2	
Step 3	
Answer	
5) Question	$6.05 \div 5 = ?$
Step 1 and 2	
Step 3	
Answer	

**PREVIEW**

# 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) 6
5) $49.64 \div 7$ a) 8 b) 6 c) 7 d) 9	6) $32.7 \div 4$ 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

# Multiplying Decimals – Placing The Decimal

**Questions**

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

1) $35.34 \div 7$ a) 5.048 b) 504.8 c) 5048.0 d) 50	2) $30.152 \div 5$ a) 603.04 b) 60.304 c) 6030.4 d) 6.0304
3) $48.51 \div 8$ a) 60.64 b) 6.064 c) 606.4 d) 6064.0	4) $21.531 \div 3$ a) 0.7177 b) 717.7 c) 7177 d) 7177
5) $42.422 \div 7$ a) 6060.0 b) 606.0 c) 6.060 d) 60.60	6) $72.7 \div 8$ a) 9.0875 b) 9.0875 c) 90.90875 d) 9.0905
7) $32.825 \div 4$ a) 8206.0 b) 8.206 c) 820.6 d) 82.06	8) $36.627 \div 6$ a) 6104.5 b) 610.45 c) 6.1045 d) 61.045
9) $14.124 \div 2$ a) 7.062 b) 70.62 c) 706.2 d) 7062.0	10) $24.844 \div 3$ a) 8281.3 b) 8.2813 c) 828.13 d) 82.813

# Dividing Decimals by Whole Numbers

**Part 1**

Fill in the table by dividing the decimals by whole numbers.

	Number	$\div 2$	$\div 4$	$\div 10$
1)	0.8	0.4	0.2	0.08
2)				
3)				
4)				
5)	0.8			

**Part 2**

Fill in the table by dividing the decimals by whole numbers.

	Number	$\div 4$	$\div 10$
1)	0.28	0.14	0.028
2)	0.44		
3)	0.68		
4)	0.84		
5)	0.92		

**Part 3**

Fill in the table by dividing the decimals by whole numbers.

	Number	$\div 2$	$\div 4$	$\div 10$
1)	.116	0.058	0.029	.012 or .0116
2)	.160			
3)	.220			
4)	.348			
5)	.524			

## Unit Test – Factors, Multiplication and Division

### Part 1

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

1) $6.34 \times 7$ a) 42 b) 49 c) 50 d) 47	2) $7.26 \times 5$ a) 40 b) 30 c) 35 d) 38
3) $9.44 \times 6$ 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)						
		1	5	.	6	3
X						5

3)						
		3	5	.	4	6
X					2	8

**Part 3**

Solve the division problems below

1) 
$$\begin{array}{r} \phantom{00} \\ 2 \overline{) 4.22} \end{array}$$

2) 
$$\begin{array}{r} \phantom{00} \\ 3 \overline{) 9.63} \end{array}$$

3) 
$$\begin{array}{r} \phantom{00} \\ 2 \overline{) 8.48} \end{array}$$

4) 
$$\begin{array}{r} \phantom{00} \\ 4 \overline{) 8.60} \end{array}$$

**Part 4**

Solve the word problems below

1) Carl bought 4 bags of snacks for a camping trip. Each bag cost him \$3.39. How much did he spend?

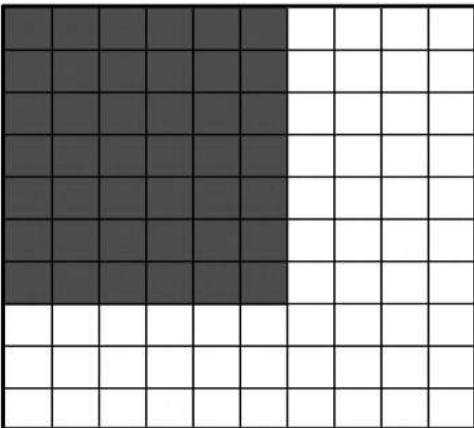


2) Lily spent \$9.60 on 3 drinks for her friends. How much did each drink cost?

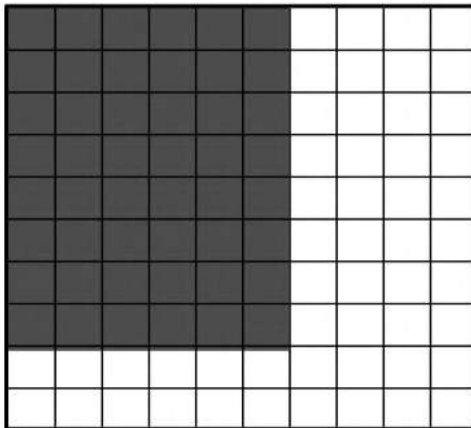


**Part 5**

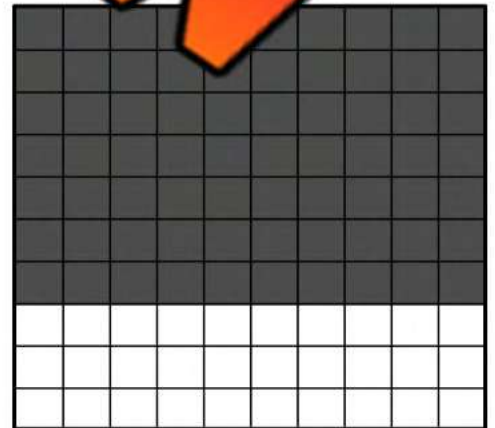
What fraction, decimal and percent of the array is shaded?



Fraction	Decimal	Percent



Fraction	Decimal	Percent



Fraction	Decimal	Percent

## Part 6

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 7

Answer the word problem below

1) The grade 6's voted for their favourite food. There were 4 options 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?

Pizza	15%
Ham Burgers	21%
Chicken	18%
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	