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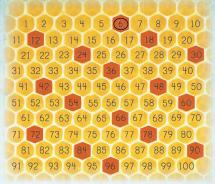
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# Hexagonal Honeycombs

Starting at the circled 3, use skip counting by 3s to color in every third hexagon on the first honeycomb.

On the second honeycomb, start at the circled 6 and use skip counting by 6s to color in every sixth hexagon.









Starting at the circled 9, use skip counting by 9s to color in every ninth hexagon on the third honeycomb.

Look at the numbers you colored in the last honeycomb. Which number pattern do they follow?

EVEN, EVEN, EVEN, EVEN

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#### MATH 4 🕥

- 1. Write a sequence by skip counting by 7s.
- 7, 14, 21, 28, 35, 42, 49, 56, 63
- 2. Circle the correct pattern for the sequence above.

EVEN, EVEN, EVEN, EVEN (EVEN, ODD, EVEN, ODD



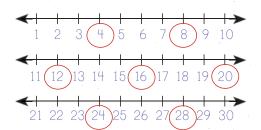
- 3. Fill in the missing numbers for the following sequence:
  - 8, <u>16</u>, <u>24</u>, 32, 40, <u>48</u>,

<u>56</u>, 64, 72, <u>80</u>, 88

4. Write the minutes around the outside of the clock by skip counting by 5s. The first two have been done for you.



5. Circle the numbers on the number lines that follow the pattern of skip counting by 4s.



#### Review

1. Continue adding triangles to complete the pattern.



2. Is this pattern a growing pattern or a repeating pattern?

3. Complete the multiplication problems.

1. Complete the problem and label it with these terms: minuend, difference, subtrahend.

> Minuend 368 - 237 Difference



\$ 2 7 . 6 5

2. Complete the problems.

6 4 8

<u>-335</u>	<u>- 53</u>	<u>-\$9.58</u>	
3 1 3	3 8	\$ 1 8 . 0 7	
7 5 3 - 3 8 2	6 4 <u>- 2 9</u>	\$ 7 6 . 2 2 - \$ 6 . 4 7	
3 7 1	3 5	\$ 6 9 . 7 5	

9 1

3. In the ancient Mayan civilization, maize (corn) was a staple part of a family's everyday diet and would also be sold to support the family. One Mayan family harvested 324 ears of maize. They need to keep 87 to eat this week. How many ears can they sell?





4. The Mayans would eat some maize fresh, but most was boiled with lime, drained, and then crushed with a stone to become  $\boldsymbol{a}$ type of dough. If the Mayan family uses  $62\,$ of their 87 ears of maize for dough, how many will they have left to eat fresh?

**5.** Each ear of maize can be traded for 7 cacao beans. If you trade 9 ears of maize, how many cacao beans will you receive?

7, 14, 21, 28, 35, 42, 49, 56



MATH 4



#### Review

1. On the calendar below, skip count by 5s aloud and circle each

# Mau

182 13 14 (15) 16 17 18 19 20 21 22 23 **24** (25) 26 27 28 29 (**3**0)

- 7. Complete the multiplication problems.

5. What is the eighth month of the year? \_\_

the circles to show comparisons.

6. Insert greater than, less than, or equal to symbols (>, <, =) in

320(>)302 1,010(<)1,100 89(<)98

4 + 6 + 9 (>)  $3 \times 5$   $3 \times 9$  (>) 8 + 3 + 7

- 2. On the calendar above, skip count by 6s and draw an X on each of the numbers you say.
- 3. Which number has both a circle and an X? 30
- 4. Complete the problems.

259

8 8 5

4 5

62 - 29





Solve the problems below to find the answer for each unknown letter. Then use those letters and their values to answer the riddle at the bottom. Try using inverse operations to solve the problems!



8 + T = 20	B - 7 = 6	M - 10 = 15	A + 8 = 16	12 + P = 23
20 - 8 = T	6 + 7 = B	15 + 10 = M	16 - 8 = A	23 - 12 = P
T = 12	B = <u>13</u>	M = <u>25</u>	A = 8	P = 11
E - 13 = 5	16 + S = 22	F - 15 = 15	5 + E = 19	T + 4 = 11
5 + 13 = E	22 - 16 = S	15 + 15 = F	19 - 5 = E	11 - 4 = T
E = <u>18</u>	S = <u>6</u>	F = <u>30</u>	E = <u>14</u>	T = <u>7</u>
H - 8 = 7	14 + N = 24	R - 1 = 8	0 + 9 = 12	V - 2 = 20
7 + 8 = H	24 - 14 = N	8 + 1 = R	12 - 9 = 0	20 + 2 = V
H = <u>15</u>	N = 10	R = 9	0 = <u>3</u>	V = 22





People lose me more than any other item. What am I?

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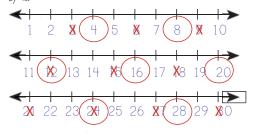
#### MATH 4 😭

#### Review

1. Write a fact family for each set of numbers. Each fact family has two addition equations and two subtraction equations.

3, 9, 12	5, 8, 13	9, 13, 22
3 + 9 = 12	5 + 8 = 13	9 + 13 = 22
9 + 3 = 12	8 + 5 = 13	13 + 9 = 22
12 - 3 = 9	13 - 5 = 8	22 - 9 = 13
12 - 9 = 3	13 - 8 = 5	22 - 13 = 9

 Circle the numbers on the number lines that follow the pattern of skip counting by 4s.

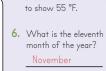


- On the number lines above, put an X on the numbers that follow the pattern of skip counting by 3s. Which numbers have both a circle and an X?
   12, 24
- 4. Your mom is trying to decide if she wants to make pumpkin pie or apple pie for dessert on Thanksgiving. You volunteer to ask everyone in your entire family which type of pie he or she prefers. You talk to all 23 people who are coming. If 17 of them choose apple pie and the rest choose pumpkin pie, how many people choose pumpkin pie? Show your work in the box to the right.



ces

°F



5. Shade the thermometer

Multiplication patterns follow similar rules to addition patterns. While multiplication is adding equal groups together to find the total amount, skip counting is a number pattern with multiples. A multiple of a number is the product of a number and an integer.

#### Multiplication Rules:

Even × Even = Even

Even × Odd = Even

 $Odd \times Odd = Odd$ 

Notice that any number multiplied by an even number will equal an even number. Multiples of 4 follow two of the multiplication rules listed above. Each multiple of 4 is an even number because 4 is an even number.

#### Even × Even = Even & Even × Odd = Even

Multiples of 4	Multiplication Problem	Rule
4	. 4 × 1	even × odd = even
8	4 × 2	even × even = even
12	4 × 3	even × odd = even
16	4 × 4	even × even = even
20	4 × 5	even × odd = even
24 -	4 × 6	even × even = even
28	4 × 7	even × odd = even

#### esson Dractice

I. Put a box around the factors and find the product.







2. Use the commutative property to rewrite this equation by changing the order of the factors.

 $12 \times 10 = 120$ 

 $10 \times 12 = 120$ 

3. Write a multiplication equation for each array.







2 x 3 = 6

4. Write a multiplication problem to represent multiplying groups of objects.





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MATH 4

#### Read with your parent or teacher

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Multiples of 7	Multiplication Problem	Rule
7 .	7 × 1	odd × odd = odd
14	7 × 2	odd x even = even
21	7 x 3	odd × odd = odd
28	7 x 4	odd x even = even
35	7 × 5	odd x odd = odd
42	7 x 6	odd × even = even
49	7 x 7	odd x odd = odd

5. Complete the chart.

6. Draw an array of squares for the multiplication problem 4 × 6. How many squares did you draw? 24



# Multiplication Mastery

Memorizing multiplication facts is an essential part of this course. Knowing the answers to multiplication problems instantly makes many math concepts much easier to teach and to learn.

You will work on memorizing Set A and Set B during this first unit. You will use the Multiplication Mastery Chart on page 395 in the back of the book to keep track of your progress. The course will tell you when to use the chart. In most lessons the course book will instruct you to work for 10 minutes or more on multiplication facts. You will be practicing Set A in this lesson. Ask your parent or teacher which resource from page 5 you will use to practice the facts.

If you already have these multiplication facts memorized, you do not need to complete the 10 minutes of multiplication facts practice, but you will still write the answers to all the problems in the "Multiplication Fact Practice" boxes in each lesson.

In addition to the facts in Set A, you will also practice the 0s, 1s, 10s, and 11s facts in the colored boxes in each review section.

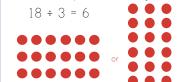
#### ♦ Multiplication Fact Practice ♦

Practice Set A for 10 minutes or more by doing *Musical Multiplication* or flashcards. Then complete the problems in this section.

compice	e the pro	DICITIS III	tilla acctio						
3	1	8	5	8	9	5	4	4	1
× 3	<u>× 6</u>	× 4 32			× 10 90			× 8 32	
6	10	6	4	3	9	6	10	3	0
× 6 36	× 7 70	× 4 24	<u>× 0</u>	× 5 15	× 9 81	<u>* 1</u>	× 9 90	× 4 12	× 8



#### 1. Draw an array for the division equation.



2. Write a division equation for this array.



24 ÷ 6 = 4



Write a division equation for this array.



4. Draw an array for the division equation.



5. The terra-cotta warriors in China (pictured below) were discovered in 1974 when workers digging a well stumbled upon the buried figures. There are an estimated 8,000 warriors at the site.

Let's divide a group of 12 warriors into 2 equal groups. How many warriors are in each group? \_

Now divide the 12 warriors into 4 equal groups. How many warriors are in each group?\_

Can you divide the 12 warriors into 3 equal groups? How many warriors are in each group?\_

6. What is the divisor in this equation? 5 What is the quotient? 6





#### MATH 4 💮

#### Review

#### I. Shade half of each shape.







2. What time is it when someone says it is "quarter to eight"?

3. Complete the chart.

Multiples of 9	Multiplication Problem	Rule
9	9 × 1	odd × odd = odd
18	9 × 2	odd × even = even
27	9 × 3	odd × odd = odd
36	9 × 4	odd × even = even
45	9 × 5	odd × odd = odd
54	9 × 6	odd × even = even
63	9 × 7	odd × odd = odd

4. Change these addition problems to multiplication problems.

$$3 + 3 + 3 + 3 + 3 + 3 + 3 + 7 \times 3$$

5. Complete each problem.

$$P - 7 = 18$$
 $P = 18 + 7$ 
 $P = 25$ 

999

+999

	3	7	9	\$ 25.86		8	8	8
+	1	8	1	<u>-\$13.95</u>	+	7	7	7
	5	6	$\cap$	\$ 1 1 9 1	1	6	6	5

#### ♦ Multiplication Fact Practice ♦

Practice Set A for 10 minutes or more by doing *Musical Multiplication* or flashcards. Then complete the problems in this

8	4	3	1	6	9	5	0
<u>× 8</u> 64					× 10		
6					9		
					× 9 81		



The value of each digit can be found by multiplying the digit and its place value.

76245

#### **PLACE VALUE**

3 × 100,000,000 = 300,000,000

1 × 10,000,000 = 10,000,000

9 × 1,000,000 = 9,000,000

7 × 100,000 = 700,000

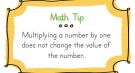
6 × 10,000 = 60,000

2 × 1,000 = 2,000

4 × 100 = 400

 $5 \times 10 = 50$ 

8 × 1 = 8



1. Read the following numbers aloud to your parent or teacher. 375,000 16,400

8,650,108

65,240,312

2. Write commas in the following numbers. The first one has been done for you.

4,895,217

21,487

5,790

355.018

541235017

3. Write the missing labels on the place value chart. Then write this number at the bottom of the chart: 214,786,345

			N	1illio	ns	The	ousa	nds		Ones	5	
	Ten Billions	Billions	Hundred Millions	Ten Millions	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	
			2	1	4	7	8	6	3	4	5	

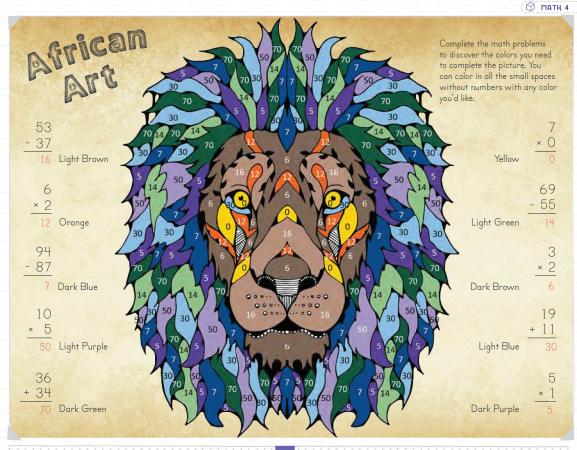
4. Which digit in the number above is in the hundred thousands place?

5. Which digit in 24,578,105 is in the ten millions place? 2

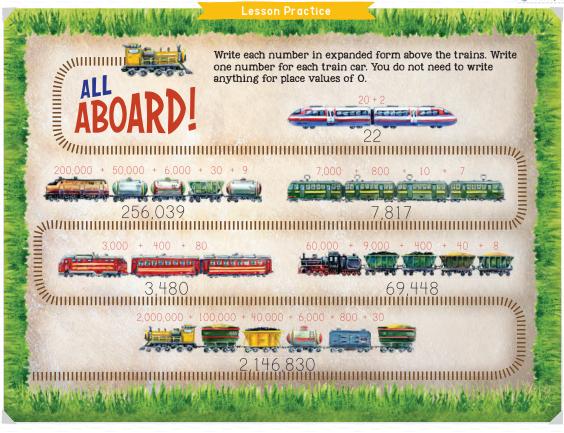
6. Which digit in 68,741,024 is in the ten thousands place?

Multiplication Fact Practice �	5	8	5	2	0	5	1
wuitiplication ract Practice v			0	3	7	0	
	<u>× 3</u>	× 4	× 1	× 3	× 10	× 5	
Practice Set A for 10 minutes or more by doing <i>Musical Multiplication</i> or flashcards.	15	32	5	9	90	25	
Then complete the problems in this section.	9	4	8	0	6	6	
	× 9	× 3	× 8	× 4	× 6	× 4	
	81	12	64	0	36	24	









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25

## MATH 4 🕅

#### **Lesson Practice Continued**

 $\label{eq:lower_lower} \textbf{I.} \quad \text{Write the following numbers in expanded form.}$ 

24,312

20,000+4,000+300+10+2

65,108

60,000+5,000+100+8

5.877

5,000+800+70+7

2. Write the standard form for each number.

6,000 + 300 + 40 + 2

6,342

300,000 + 6,000 + 500 + 20 90,000 + 8,000 + 70 + 4

98,074

20,000 + 6,000 + 100 + 20

26,120

#### Review

1. Write the missing labels on the place value chart. Then write this number at the bottom of the chart: 248,147,890

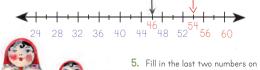
В	าร	N	1illio	ns	The	ousa	nds		Ones	
		Hundred Millions	Ten Millions	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
		2	4	8	1	4	7	8	9	0

- 2. Which digit in 415,201,325 is in the ten millions place?  $\frac{1}{2}$
- 3. Write commas in the following numbers.

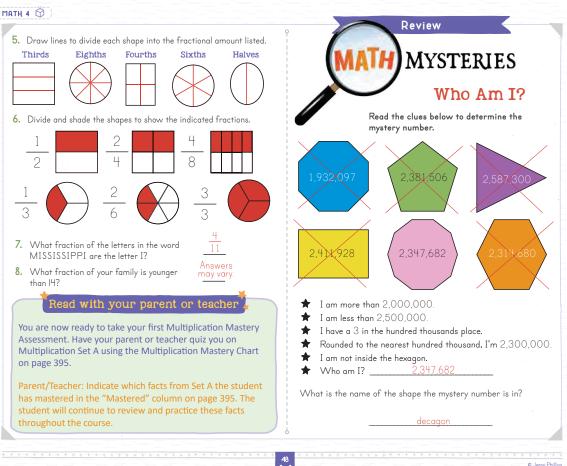
9.814.526 25.741 8.547

8,547 584,765,012

4. What number is the arrow pointing to on the number line? 46



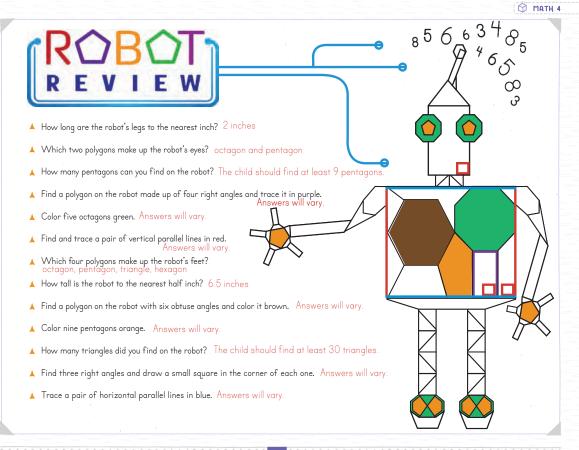
- Fill in the last two numbers on the number line.
- Draw an arrow to indicate the number 54 on the number line.

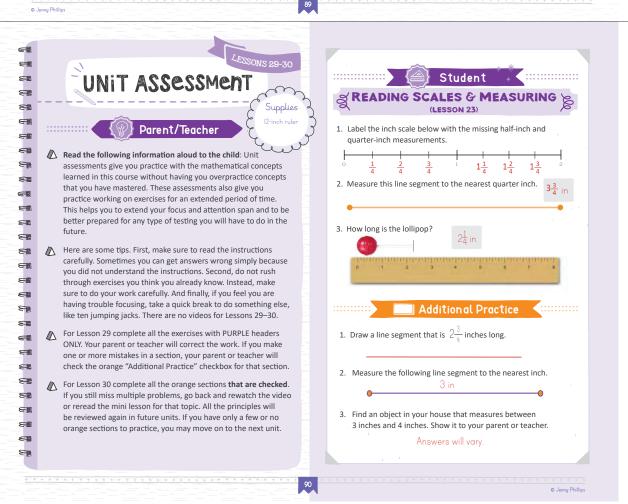




How much money does Niko

have left? \$ 7.00



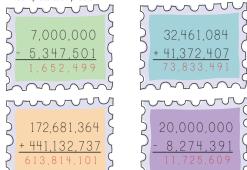






1. Complete each problem.

త్ల



2. Write the following numbers using digits.

Twenty-four million, six hundred seventy-two thousand, nine hundred thirty-one 24.672,931

Seven billion, three hundred nineteen million, nine hundred forty-six thousand, two hundred four  $\_7.319.946.204$ 

3. Write the following number using words.

357 618 452

three hundred fifty-seven million, six hundred eighteen thousand, four hundred fifty-two

#### Additional Practice

Use the chart to answer the following questions.

Object	Number
* *	48,304,971
***************************************	22,374,019
666	60,000,000
	35,476,945

How many cacao beans are there? Write the number in word form.
 thirty-five million, four hundred seventy-six thousand,
 nine hundred forty-five

2. How many rubber ducks and bees are there in total?

70,678,990

37,625,981

3. How many more bottles of milk are there than rubber ducks?

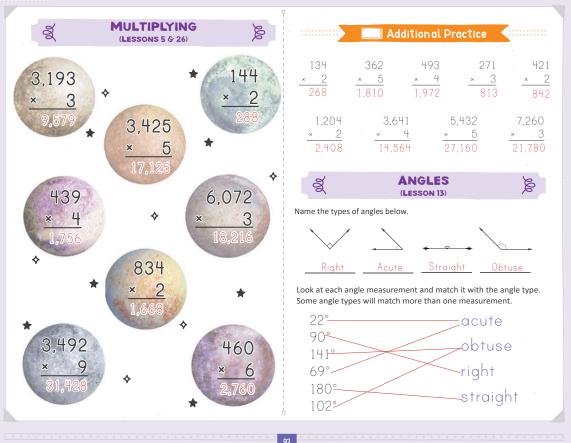
4. How many cacao beans and bees are there in total?

83,781,916

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Label each clock with the type of angle formed by its hands.







Right







Straight

ELAPSED TIME (LESSONS 18 & 25)

 At 7:24 AM you started your math lesson. At 8:48 AM you finished the last problem. How long did the lesson take you to complete?

1 hour 24 minutes

11:19 AM

 Next, you started working on your science project. You started at 9:12 AM, and it took 2 hours and 7 minutes to complete. What time did you finish your science project? 3. Mary and her family are driving from Kansas to Colorado. They leave at 7:35 AM and arrive at II:23 AM. How long did the drive take?

3 hours 48 minutes

2:11 PM

4. Takeshi ran in a race for a local charity. It took him 2 hours and 27 minutes to complete the race, and he finished at 4:38 PM.

What time did the race start?

## Additional Practice

Fill in the missing start and end times for each flight. Show your work on a separate piece of paper.

Destination	Start Time	Flight Duration	End Time
Hamburg, Germany	8:3I AM	3 hours 13 minutes	11:44 PM
Vancouver, Canada	2:36 PM	7 hours 39 minutes	10:15 PM
Nairobi, Kenya	1:50 PM	2 hours 52 minutes	4:42 PM
Nong Kai, Thailand	1:47 AM	8 hours 24 minutes	10:11 AM
Buenos Aires, Argentina	5:57 PM	2 hours 42 minutes	8:39 PM

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#### MATH 4 😭

## PLACE VALUE & ROUNDING

(LESSONS 7, 11 & 19)

1. Round each number below to the place values indicated.

	Ten Thousands	Millions	Ten Millions			
51,487,354	51,490,000	51,000,000	50,000,000			
88,274,650	88,270,000	88,000,000	90,000,000			
37,623,013	37,620,000	38,000,000	40,000,000			
15.378.634	15,380,000	15,000,000	20,000,000			

2. Match each number with its value rounded to the nearest million.

247,484,102	248,000,000
242,968,452	246,000,000
245,35,7,951	245,000,000
247,604,874	243,000,000
243,717,832	247,000,000
246,278,349	244,000,000

Circle the digit in the thousands place. Put a box around the digit in the ten millions place. Underline the digit in the hundred thousands place. Round the number to the hundred millions place.

0

347,61(2),854

300,000,000

#### Additional Practice

1. Round the number in red to each value listed in the chart.

347,612,854

round to the nearest					
347,600,000	348,000,000	350,000,000	300,000,000		

2. Write the missing labels on the place value chart. Then write this number at the bottom of the chart: 841,067,247



Millions			The	ousa	nds	Ones			
Hundred Millions	Ten Millions	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Ones		
8	4	1	0	6	7	2	4	7	

3. Round 37,691,452 to the nearest ten million.

38,000,000

4. Round 7,121,547 to the nearest hundred thousand.

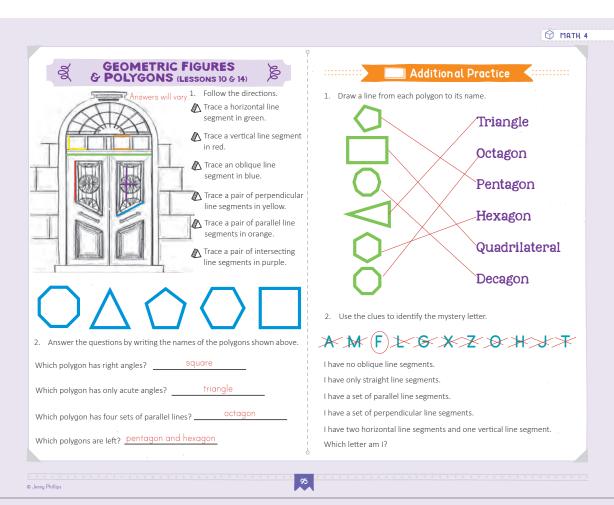
7 100 000

5. Write the place value of each red digit.

4,874,352 271,684,025 thousands ten millions

54,309,754

hundred thousands









 Grace completed the problem below. Round both numbers to the nearest ten thousand and estimate the answer. Based on your estimation, is Grace's answer likely right or wrong?

913413 **825**,**2**49 - 344.917

<u>- 340,000</u> 500,000

likely wrong

690.432

2. Order the numbers below from greatest (on top) to least.

347,287,104	347,841,358
347,841,358	347,764,020
347,231,985	347,287,104
347,764,020	347,234,765
347,234,765	347,231,985

#### Additional Practice (IIIIIIIIIII

1. Compare the two numbers and fill in the <, >, or = symbol.

 39,715,624 < 39,717,842</td>
 2,629,374 < 2,629,719</td>

 84,617,619 > 84,617,270
 492,726,311 < 492,746,997</td>

 2,674,824 > 677,917
 3,374,035 < 21,379,674</td>

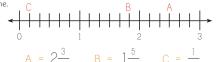
2. Round to the nearest hundred thousand and estimate the sum.

2,631,049 + 1,282,437 2,600,000 + 1,300,000 3,900,000

# FRACTIONS & MIXED NUMBERS (LESSONS 15 & 21)



Plot and label the following mixed numbers and fraction on the number line.



2. Divide and shade each shape to match the fraction listed.



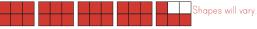








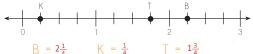
3. Draw a picture to represent the mixed number  $4\frac{4}{6}$ 



Additional Practice

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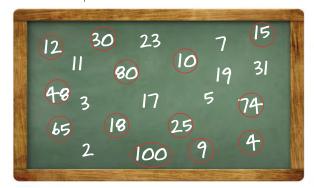
1. Write the location of each point shown on the number line.



2. Draw a picture to represent the mixed number  $2\frac{1}{u}$ 



1. Circle all the composite numbers on the board. There are 13.



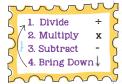
2. List the composite numbers you found above in order from least to greatest. Then circle all the odd composite numbers listed below.

+ (9) 10 12 (15) 18 (25) 30 48 (65) 74 80 100

3. Complete each division problem on scratch paper.

41 6/246 4/168

73 3/219 51 7/357



4. Ralph and Ernesto are collecting rocks for a rock collection. Today at the park, they found 4 black rocks and 6 shiny multicolored rocks. What fraction of their rock collection is made up of black rocks?







Targeted Multiplication Practice any problems you missed in your Set D quiz in Lesson 49. Then complete the problems in this section.

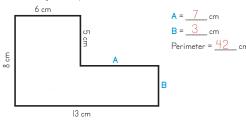
12	4	12	7	8	9	12	12	12	12	12	12	12
× 3 36	× 8 32	× 8 96	× 3 21	× 6 48	× 9 81		<u>* 11</u> 121	× 6 72	× 12 144	<u>* 5</u>	× 7 84	× 9 108
9	6	11	3	5	5	4	7	2	6	3	8	6
<u>* 12</u> 108	× 3 18	<u>* 12</u> 132		<u>* 12</u> 60	× 7 35		× 12 84	<u>* 12</u> 24	× 7 42	× 12 36	<u>* 12</u> 96	

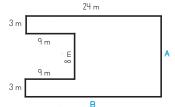
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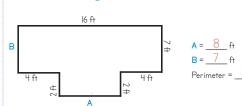
**МАТН 4** 

1. Find the lengths of the missing sides. Then find the perimeter of each irregular shape.

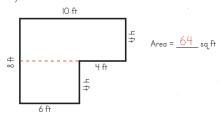


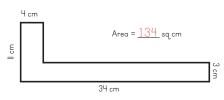


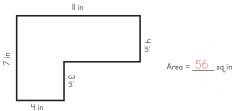




2. Find the area of each irregular shape by dividing it into smaller shapes, finding the area of each shape, and adding those areas together. The first shape has been divided for







MATH 4

## Review

I. Circle the fraction that is not in simplest form and reduce it.



2. Reduce each fraction to its simplest form.



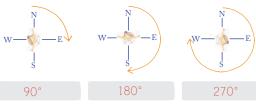
3. Find a common denominator to add or subtract the fractions.

$$\frac{\cancel{X}^{4}}{\cancel{X}^{12}} + \frac{3}{12} = \frac{7}{12} \qquad \frac{12}{48} + \frac{\cancel{X}^{6}}{\cancel{X}^{48}} = \frac{18}{48} \qquad \frac{\cancel{X}^{15}}{\cancel{X}^{20}} + \frac{2}{20} = \frac{17}{20}$$

$$\frac{9}{15} - \frac{\cancel{2}^{6}}{\cancel{5}^{15}} = \frac{3}{15} \qquad \frac{16}{24} - \frac{\cancel{2}^{8}}{\cancel{6}^{24}} = \frac{8}{24} \qquad \frac{5}{8} - \frac{\cancel{1}^{4}}{\cancel{2}^{8}} = \frac{1}{8}$$

4. Write all the multiples of 6 between 24 and 66.

5. Write the measurement of each clockwise turn in degrees.



6. Which geometric transformation (translation, rotation, or reflection) needs to happen to move the blue triangle directly on top of the green triangle?

68



9 /513

7. Complete each problem. Use scratch paper if necessary. 34

7 /238

12 <u>× 12</u>