NPS Learning in Place
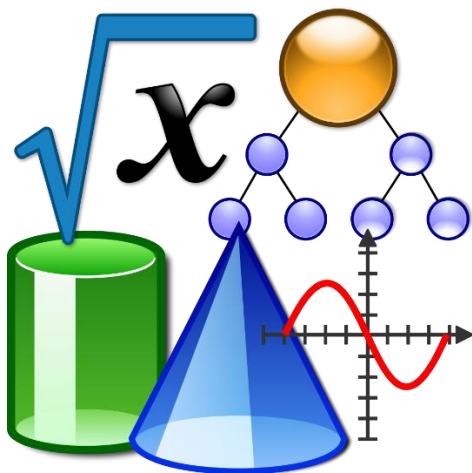
MATH 6/6H

Name: _____ School: _____ Teacher: _____

April 27 – May 15

Week 1	• Comparing an Ordering Rational Numbers
Week 2	• Integers
Week 3	• Coordinate Plane • Ratios

Week 1

6.2 TSW:

a) represent and determine equivalencies among fraction, mixed numbers, decimals, and percents;

b) compare and order rational numbers.
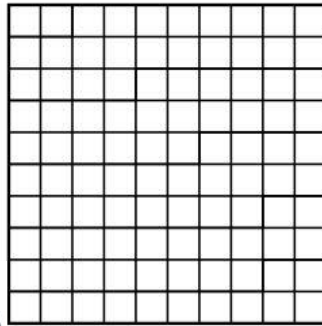
FDP Equivalency Grids.

Hints: Percent (%) means out of one hundred. 10% can be written as $\frac{10}{100}$

Find the equivalent fraction, decimal or percent and shade the grids according to the given information.
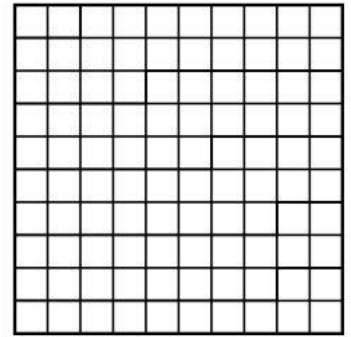
Shade: $\frac{11}{25}$

Decimal:_____

Percent:_____
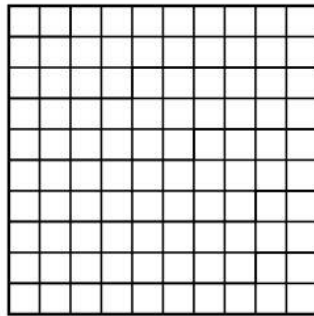
Notice your denominator is not out of 100. What's an equivalent fraction to $\frac{11}{25}$ with a denominator of 100?

Fraction:_____

Percent:_____
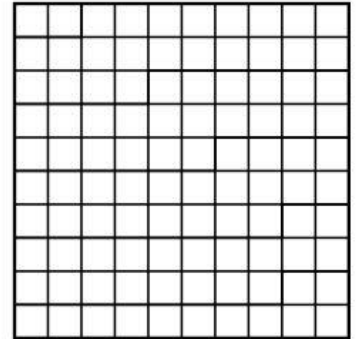
Shade: 0.35

Shade: $\frac{1}{5}$

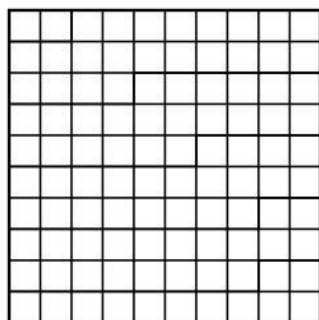Decimal:_____

Percent:_____

Fraction:_____

Shade: 5%

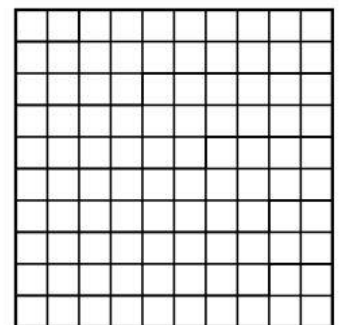Decimal:_____

Fraction: _____

Shade: 18%

Percent:_____

Create your own Example!

Fraction:_____

Percent:_____

Decimal:_____

Write the equivalent fraction decimal and percent for each grid. Simplify each fraction.

Fraction: _____

Decimal: _____
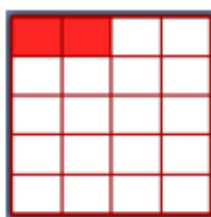
Percent: _____

Fraction: _____

Decimal: _____

Percent: _____

Shade in the grid to represent $\frac{15}{100}$
Write the equivalent decimal and percent.
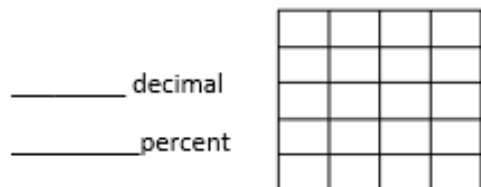
_____ decimal

_____percent

Write the fraction, decimal, and percent:
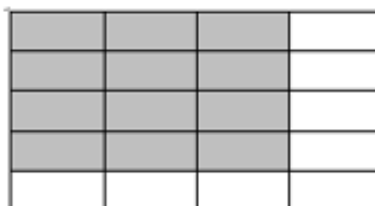
Fraction:	Decimal:	Percent:

Shade in the grid to represent 20%

Write the equivalent decimal and fraction.

_____decimal   _____fraction

Write the fraction, decimal, and percent:
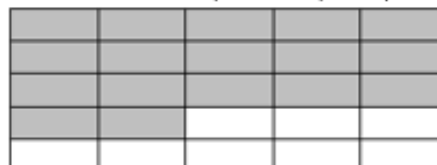
Fraction:	Decimal:	Percent:

Shade in the grid to represent **0.16**
Write the equivalent percent and fraction.
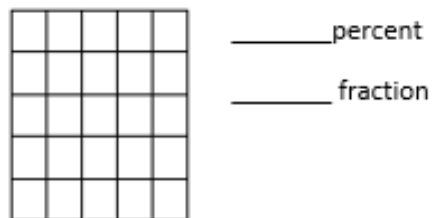
_____percent

_____ fraction

Write the fraction, decimal, and percent:
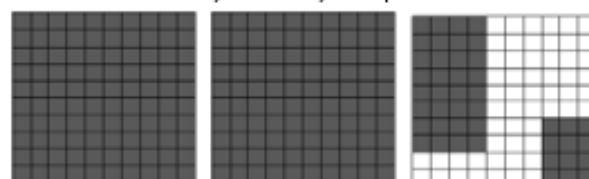
Fraction:	Decimal:	Percent:

1. Create a design/emoji using at least five different colors. Examples: Heart, tree, number, letter, etc

2. Using this design count the number of squares that use a particular color out of the total squares taken by your design/emoji. If your design does not take up the entire 10 by 10 grid then your denominator should not be 100. If you don't have any coloring utensil, label the boxes with the first letter of the color. Example: Red R
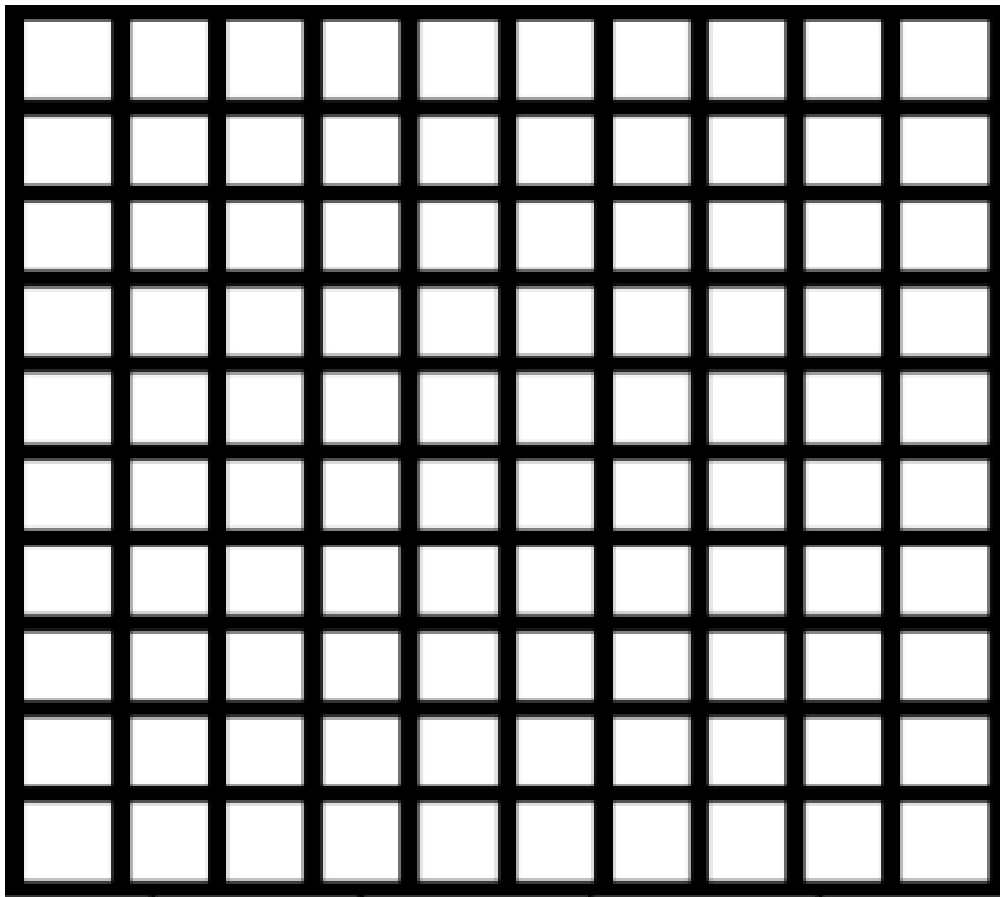
Color	Number	Fraction	Decimal	Percent
Total				

Fraction to Decimal	divide the numerator by the denominator (top dog gets the house)	$\dfrac{1}{4}$ →	$\dfrac{3}{7}$ →
Decimal to Fraction	write it like you say it then simplify if needed	0.7 → "seven tenths" → $\dfrac{7}{10}$	4.28 → "four and twenty eight hundredths" → →
Decimal to percent	move the decimal point two places to the RIGHT and add a percent sign	2.36 → 2.36 → 236%	0.03 →
Percent to Decimal	move decimal point two places to the LEFT and remove the percent sign	32% → 32% → 0.32	17.3% →
PERCENT TO FRACTION	1. Convert to a fraction. 2. Simplify if needed.	**Example 1:** 32%	**Example 2:** 207%
Fraction to percent	1. Convert to a decimal 2. Convert the decimal to percent (move decimal 2 places to the right)	**Example 1:** $\dfrac{3}{8}$ -> **Example 2:** $4\dfrac{3}{4}$ ->	

Practice

Write the following numbers as fractions. Simplify if need.

1. 2.25 2. 62% 3. 0.17 4. 75% 5. 100%

Write the following numbers as decimals.

6. $\dfrac{7}{8}$ 7. 45% 8. $3\dfrac{3}{5}$ 9. 3.12% 10. $\dfrac{1}{3}$

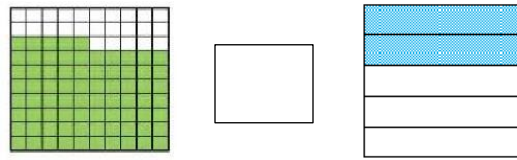11. $4\dfrac{9}{25}$ 12. $\dfrac{1}{5}$ 13. 800 14. $5\dfrac{1}{2}$ 15. 0.65%

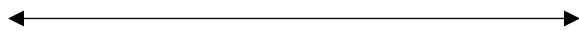|	
1. Write the percentage represented below. Compare the percentages using the following symbols: <, ≤, ≥, >, =. _____	2. Write the percentage represented below. Compare the percentages using the following symbols: <, ≤, ≥, >, =.
3. Place the following rational numbers in descending order: $\frac{4}{7}, \frac{3}{7}, 1\frac{3}{5}, \frac{10}{9}$	4. Place the following rational numbers in ascending order: $3\frac{1}{2}, 0.192, \frac{12}{5}, 19\%$
5. Put the following numbers in order from least to greatest: 2/3, 48%, 0.11, 109%	6. Arrange the following numbers in descending order: 50%, 1/3, 0.3, 0.87
7. Compare the following numbers using inequality symbols (<,>, =). 42% ___ 5/8	8. Compare the following numbers using inequality symbols (<,>, =). 0.67% ___ 0.37
9. Which list of numbers is arranged in descending order? A 1.25, 1.25%, $1\frac{2}{5}$ B $1\frac{2}{5}$, 1.25%, 1.25 C 1.25%, 1.25, $1\frac{2}{5}$ D $1\frac{2}{5}$, 1.25, 1.25%	10. Place the following in order from least to greatest $140, \frac{1}{4}, 1.40\%$
11. Place the following rational numbers in descending order: $16\%, \frac{1}{5}, 0.1\overline{6}, \frac{16}{10}$	12. Place the following rational numbers in ascending order: $\frac{15}{4}, 175\%, \frac{3}{4}, 0.175$
13. Write the percentage represented below. Compare the percentages using the following symbols: <, ≤, ≥, >, =. _____	14. Write the percentage represented below. Compare the percentages using the following symbols: <, ≤, ≥, >, =. _____
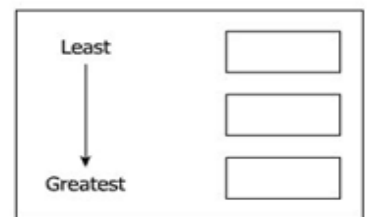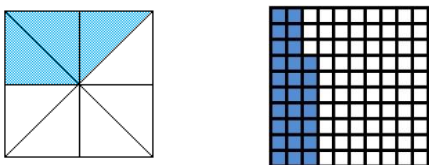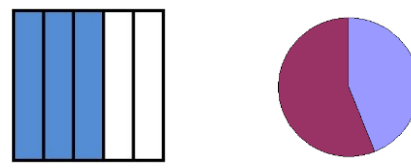
1. Write the following fraction as a decimal $$8\frac{4}{25}$$	2. Writhe the following decimal as a fraction or mixed number. 2.4
3. Which fraction is equivalent to 0.875? A. $\frac{7}{8}$ B. $\frac{43}{50}$ C. $\frac{17}{20}$ D. $\frac{12}{15}$	4. The distance 13,860 feet is equal to $2\frac{5}{8}$ miles. Write this mileage as a decimal. A. 2.625 miles C. 2.375 miles B. 2.575 miles D. 2.15 miles
5. The Titanic Toy Company has a 4% return rate on its products. Write this percent as a fraction in simplest form.	6. In Austin's class 68% of the students ride the bus to and from school. What fraction of the class rides the bus?
7. In the Evanson family, 7 out of 10 family members play piano. What percent of the family members play piano?	8. The table shows the fraction of the students in the sixth grade who play each sport. What percent of the students play baseball? | Sport	Fraction of Students
Baseball	$\frac{3}{20}$
Basketball	$\frac{4}{25}$
Football	$\frac{1}{5}$
Volleyball	$\frac{1}{10}$	

9. River Road is $11\frac{4}{5}$ miles long. Prairie Road is 14.9 miles long. How much longer is Prairie Road than Riven Road as a decimal?

10. The frequency table shown the favorite jungle animals of students in biology class. What fraction of the students chose tree frogs? Write the fraction as a decimal.

Animal	Tally	Frequency
Lions	$\cancel{||||}\,|||$	8
Elephants	$\cancel{||||}$	5
Tree Frogs	$\cancel{||||}\,|$	6
Flamingos	$\cancel{||||}$	5

Answer two out of the four journal prompts.

1. When ordering rational numbers, detail a strategy used and discuss how you can justify your solution.
2. Describe how rational numbers can be compared and ordered using a number line.
3. How can we represent rational numbers in various ways? Provide an example in your explanation
4. Why is it necessary to have multiple forms of rational numbers?

Write one decimal and one fraction in the missing squares. The four numbers should be listed in ascending order.
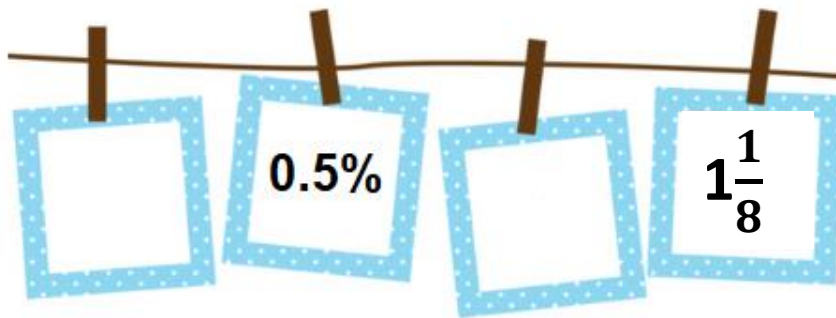
Create your own problem:

- The numbers should be listed in descending order.
- You must have a percent, decimal, fraction and mixed number.

Week 2

6.3a Identify and represent integers (models, point on a number line, practical situations)

An integer includes the set of whole numbers (positives), their opposites (negatives), and zero.

Anything less than zero is a negative.   Anything greater than zero is a positive.

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10
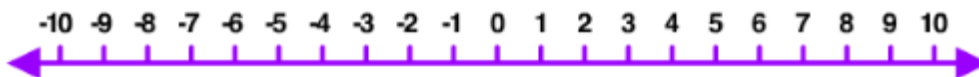
No fractions or decimal digits.

Fill in the empty boxes with the corresponding integer.

1. -5 -4 ☐ -2 -1 ☐ 1

2. 0 2 4 ☐ ☐ ☐ 12 14
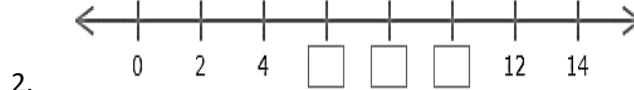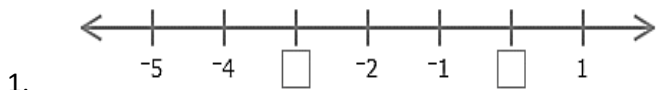
Determine the measure for each thermometer.

1. °C	2. °C	3. °C	4. °C
A. 32°	A. 2°	A. -13°	A. 3°
B. 34°	B. -2°	B. -16°	B. 6°
C. 37°	C. 4°	C. -22°	C. 12°
D. 43°	D. -4°	D. -24°	D. 14°

In your own words . . .
Why would we use the integer +5 to describe where we would find a bird, but use -5 to describe where we would find a fish?

_____

_____

Integers for Real-Life Situations

Underline the key word	Integer:		Underline the key word:	Integer:
a. lost 6 points		g. 7 inches below normal		
b. 3 strokes below par		h. $5 off the original price		
c. $5 deposit		i. 10 strokes above par		
d. a loss of $30		j. a $35 withdrawal		
e. 12 centimeters longer		k. temperature of 10 degrees below zero		
f. 5000 feet above sea level		l. 5 yard gain on the first down		

Balancing a Check Book

> The **balance** in a money account is the amount of money in the account, after something has been added or subtracted. When you **"balance" your check book**, you are making sure that what you added or subtracted is the same as what the bank added or subtracted.
>
> **You subtract** from your total if you write a check, make a withdrawal, or run your debit card.
> **You add** to your total if you make a deposit.

In the first month of Mrs. Wilson's new business, she had to make several transactions. When she went on-line to check her balance, the bank said she had $2660 in her account. Represent each transaction in the table using an integer to see if her amount is the same as what the bank says.

Transaction	Amount
Beginning Balance:	$2,250
wrote a check for $165	
Balance:	
deposited $750	
Balance:	
withdrew $100	
Balance:	
wrote a check for $280	
Ending balance:	

6.6a   Add, subtract, multiply, and divide integers (NO CALCULATOR)
6.6b   Solve practical problems involving operations with integers

In your own words . . .

Two teams are playing tug-of-war. There are 5 players pulling for
the negative team and 3 players pulling for the positive team.

Negative Team   *Positive Team*
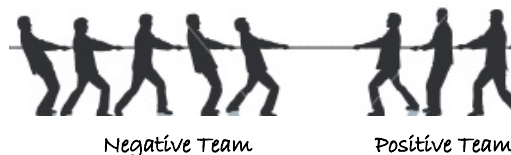
Assuming that everyone is about the same strength, who do you expect to win? Why?

_____

_____

When adding integers

If they have the same sign, they are on the same side of the zero, so you just add them.

You have some negatives, then you get some more negatives, so you have all negatives.

-6 + -7 = -13
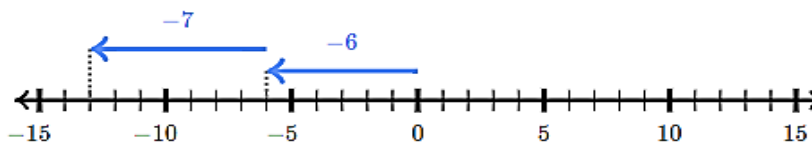
When subtracting integers

A minus sign is really a negative sign, so you can "find the opposite of"

-8 – (-3) =   -8 and the opposite of -3

          "the opposite of" -3
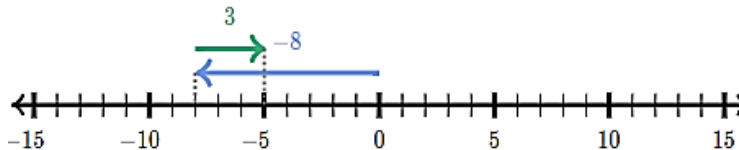
So you are really adding -8 and +3

Subtracting integers is like tug-of-war.

Below each picture, write down who is going to win and how many people stronger the winning team is.

1. Who will win? How many stronger?	2. Who will win? How many stronger?
Negative Team Positive Team	Negative Team Positive Team

Zero Pairs

A zero pair is a negative and a positive together. When combined, they cancel or "zero out".

$$-4 + 4 = 0$$
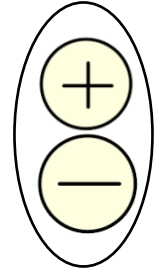
Matching. For each equation at the top, there is one model below. Write the letter for the model in the corresponding blank by each equation at the top.

____ 3. (-5) + (+2) = -3   ____ 5. -3 + 8 = 5   ____ 7. 3 – (-2) = 5   ____ 9. 5 + (-3) = 2

____ 4. -2 + 5 = 3   ____ 6. 3 + 2 = 5   ____ 8. -3 + 5 = 2   ____ 10. -5 – (-6) = 1

A.   ⊕⊕⊕   ⊕⊕

B.   ▲ = 1   △ = -1
      ▲▲ ▲ ▲   +   △△ △
      ▲ ▲

C.   ⊕⊕   ⊖⊕ ⊖⊕
      ⊕⊕⊕

D.

E.

F.

G.   ⊖⊖⊖   ⊕⊕
      ⊖⊖

H.

Practical Problems

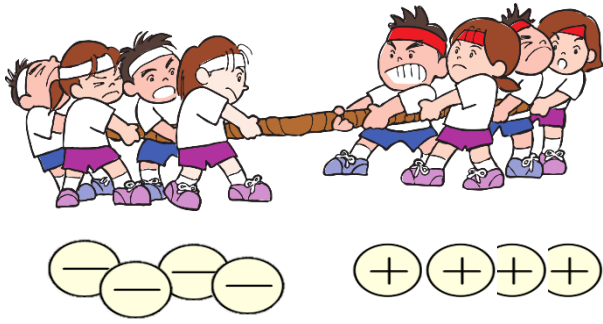11. Eli took off in his helicopter from 1,300 feet above sea level. He later landed at a location 3,900 feet above sea level. Which integer represents Eli's change in altitude?

12. The temperature in Weston was ⁻6 degrees Fahrenheit. The temperature in Arcadia was 28 degrees Fahrenheit. How much warmer was the temperature in Arcadia than the temperature in Weston?

13. While hiking, Terrell went down 100 feet. If Terrell started at 100 feet above sea level, which integer represents his elevation now?
A. 200   B. 100   C. 0   D. -100

Did you know that subtraction is a short-cut?

Mathematician's Proper Math:

The lazy (but smart) mathematician realized that he could shorten this math problem by using a short-cut. What short-cut did he figure out?

(-7) + (+5) + (+13) + (-8) + (-4) = -1

-7   +5   + 13   − 8   − 4 = -1

_____

_____

When multipying and dividing,

negatives always stay in pairs.

$$(+) \times (+) = (+)$$
$$(-) \times (-) = (+)$$
$$(+) \times (-) = (-)$$
$$(-) \times (+) = (-)$$
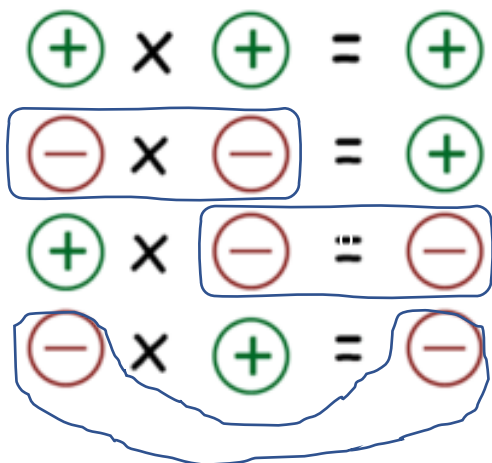
Key Concept and Vocabulary

factors   product

$8 \cdot (-5) = -40$

$-12 \div (-3) = 4$

dividend   divisor   quotient

Multiply and divide.
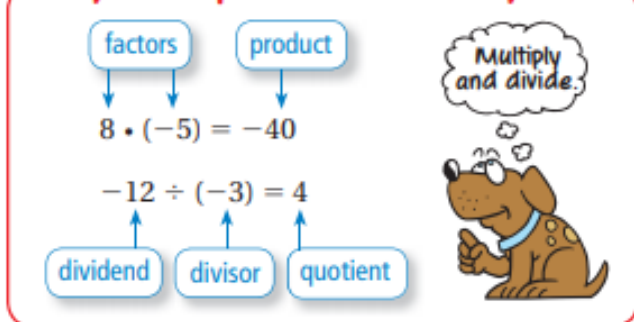
Visual Model

$4 \cdot (-2) = (-2) + (-2) + (-2) + (-2)$

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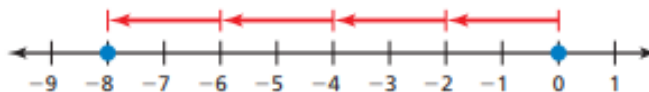
Skill Examples

1. $-3 \cdot (-4) = 12$ ← same sign, product and quotient positive
2. $-36 \div (-6) = 6$ ←
3. $-7 \cdot 0 = 0$
4. $-10 \div 5 = -2$ ← different signs, product and quotient negative
5. $-5 \cdot 6 = -30$ ←

Application Example

6. Each of your six friends owes you $5. Use integer multiplication to represent the total amount your friends owe you.

$$6 \cdot (-5) = -30$$

The total amount owed is $30.

Find the product or quotient.

7. $-3 \times (-5) =$ _____

8. $7(-3) =$ _____

9. $0 \cdot (-5) =$ _____

10. $(-5)(-7) =$ _____

11. $-8 \cdot 2 =$ _____

12. $(-5)^2 =$ _____

13. $(-3)^3 =$ _____

14. $4(-2)(-3) =$ _____

15. $-16 \div 4 =$ _____

16. $-20 \div (-5) =$ _____

17. $\dfrac{-9}{3} =$ _____

18. $\dfrac{-20}{-10} =$ _____

Complete the multiplication or division equation.

19. $-15 \div$ _____ $= -3$

20. $45 \div$ _____ $= -5$

21. _____ $\div (-20) = 5$

22. $8 \cdot$ _____ $= -64$

23. _____ $\cdot (-9) = 27$

24. $-12 \cdot$ _____ $= -96$

25. **TOTAL OWED** Each of your eight friends owes you $10. Use integer multiplication to represent the total amount your friends owe you. _____

_____

26. **TEMPERATURE** The low temperatures for a week in Edmonton, Alberta are $-15°C$, $-12°C$, $-10°C$, $-12°C$, $-18°C$, $-20°C$, and $-25°C$. What is the mean low temperature for the week? Show your work.

_____

_____

Topic 4.4

27. Last week, Omar deposited a $900 check from his restaurant job and spent $100 on a silver necklace. What was the change in how much money Omar had?

29. Eli took off in his helicopter from 1,300 feet above sea level. He later landed at a location 3,900 feet above sea level. Which integer represents Eli's change in altitude?

28. According to his bank statement, Brennan spent $3,000 on an antique iron bench. If Brennan's bank account started out with a balance of $5,000, what was the final balance?

30. Kiera ended a hike at an elevation of 900 meters above sea level. She had started at an elevation of 200 meters below sea level. Which integer represents Kiera's change in elevation?

OOPS!

Groupings:

If you have groupings inside of groupings, *do the inside most one first*.

Parentheses (   ), absolute value | | (e.g., $|3(-5+2)|$), and the division bar (e.g., $\frac{3+4}{5+6}$)   Do the numerator and the denominator separately, then divide.

Exponents

Multiply OR **D**ivide **LEFT TO RIGHT**

Left to Right

Add OR **S**ubtract **LEFT TO RIGHT**

Left to Right

If they are inverse operations (the same step) you do the problem in the order you read it – from left to right.

Don't FORGET!

Whatever is next to the exponent is your base.

$$(-4)^2 = (-4)(-4) = +16$$

or

$$-4^2 = \text{negative } 4 \times 4 = -16$$

1. $5^2 + (3^2 \times 5) + 5$

   =   + (x 5) + 5

   =   +   +

   =   +

   = 75

2. $8 - (9 + 6 + 1)$

   =   − (+)

   =   −

   = -8

3. $8 \div 2^2 + (5 + 6) \times -6$

   =   ÷   + (   ) ×

   =   ÷   +   ×

   =   +

   =

4. $|4 - 8^2| \times 3$

$= |\quad - \quad| \times$

$= |\quad| \times 3$

$= \quad \times$

$=$

5. $(7^2 - 3^2) + 4$

$= (\quad - \quad) +$

$= (\quad) +$

$=$

6. $\dfrac{5 \times 12}{18 \div -3}$

$= $

$\underline{\qquad}$

$= -10$

7. $\dfrac{50 \div 5}{2} + 3$

$= 8$

8. $|6 \div 3| + 2 - 9$

$= -5$

9. $\dfrac{6 - 4 \times 9}{3^2 - 2^2}$

$= -6$

10. $\dfrac{20 \div |2 - 7|}{-2} - 1$

$= -3$

11. $2^2 + 8 \div 4$

$=$

$=$

$= 4$

12. $-2^2 + 8 \div 4$

$=$

$=$

$= 0$

13. Explain why the answer in #11 is four but the answer in #12 is zero. (Hint: Smiley emoji wants you to remember!)

6.6a   Add, subtract, multiply, and divide integers (NO CALCULATOR)
6.6b   Solve practical problems involving operations with integers
6.6c   Simplify numerical expressions involving integers. (NO CALCULATOR)

1. Which equation matches the model below?

A. 4 + 10
B. 4 + 5
C. 4 – 5
D. 4 – (-5)

2. Which equation matches the model?

Key
■ = -1   □ = 1

A. -12 ÷ -4   B. -12 ÷ 4   C. 12 ÷ 4   D. -12 ÷ 3

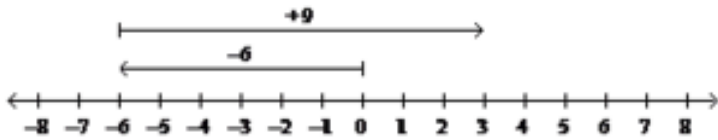3. Which model shows -3 – (-4)?

A.

B.

C.

D.

4. Which addition equation matches the problem modeled?

+9
-6

A) -6 + (-9) = 3   B) -6 + 9 = 3

C) -6 + 3 = 9   D)9 + (-3) = -6

5. Eve recorded a temperature of 23°C, and Colton recorded a temperature of -12°C. How much warmer was the temperature that Eve recorded?

6. What is shown by the model?

Key
□ = 1   ■ = -1

A. 4 + 2 = 6   B. -4 + 2 = -2

C. 4 + (-2) = 2   D. -4 + (-2) = -6

7. What is modeled below?

A. -4(-7)   B. -4(7)   C. 4(7)   D 4(-7)

8. Lia carefully tracks her money. Her records indicate she spent $1,000 on a canoe and deposited $3,000 she made from an online auction. What was the change in how much money Lia had?

9. Write a word problem in which you are adding a positive and a negative number and your answer will be 5.

10. Isaiah was told the problem below should equal -21. What did he do wrong?

= -17 – (-9 + 5)

= -17 – (4)

= -13

Adding Integers "Dot" Game

Rules: Player take turns connecting any two dots with a line. If a player's line closes a box, he or she draws their initials s in the box, adds the integer in the box to his or her score, and takes another turn. The same player keeps going until his or her line does not close a box. In the end, the player with the highest total score wins. Note: Each player must take their turn (no passing), and each player must add the integer in every box he or she closes to his or her score. Keep playing until all the boxes are enclosed in. Some lines have already been drawn in for you.

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

Week 3

6.8

When graphing ordered pairs in a coordinate plane, remember to move along the x-axis first and then the y-axis. One way to remember this is that you must walk (x-axis) onto the elevator before you travel up or down (y-axis). Think "C" to identify the quadrant locations.
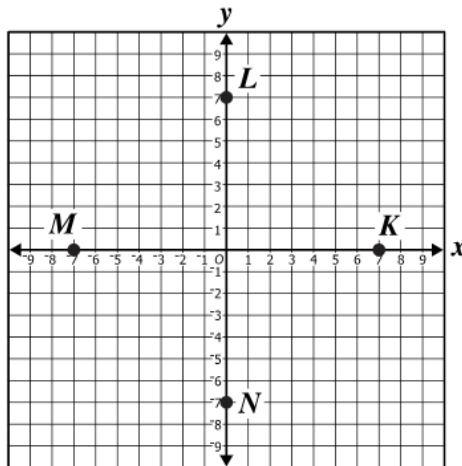
1. Label the origin, axis, and quadrants of the coordinate plane.
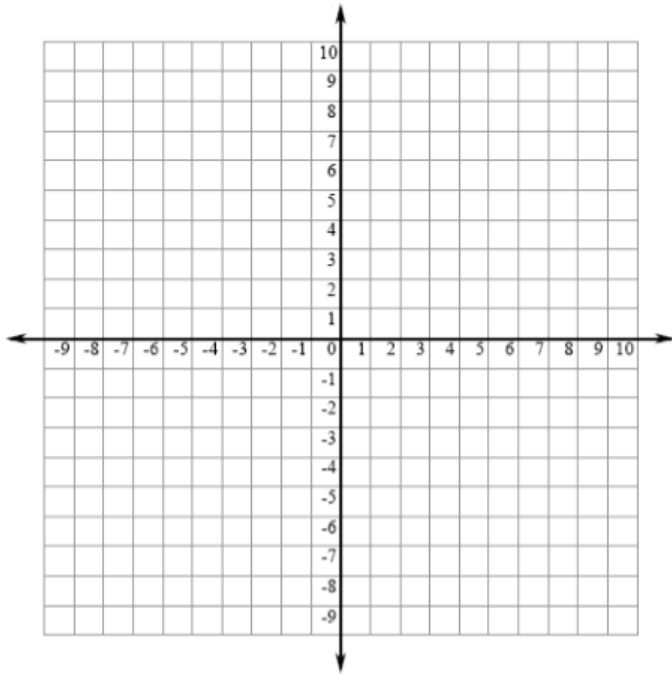
Vocabulary
x-axis
y-axis
quadrant I
quadrant II
quadrant III
quadrant IV
origin

2. Which graphed point is best represented by (-7, 0)? *(TestNav)*

A. Point K   B. Point L   C. Point L   D. Point M

3. Directions: Use the given numbers to create an ordered pair representing a point on the x-axis. *(TestNav)*

$$(\ \boxed{}\ ,\ \boxed{}\ )$$

$$\boxed{-6}\ \boxed{-2}\ \boxed{0}\ \boxed{3}\ \boxed{5}$$
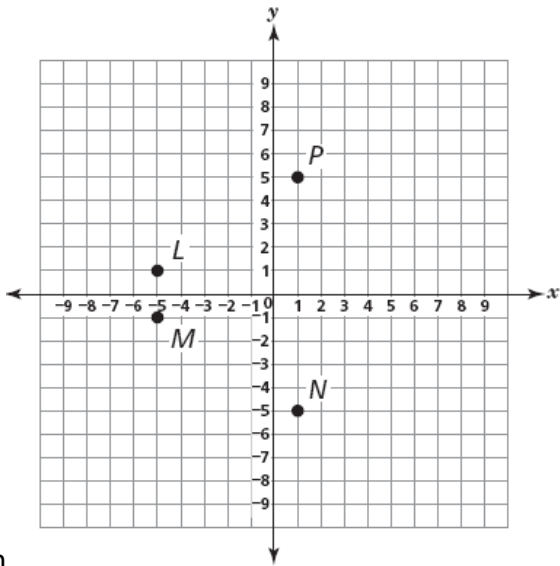
4. Which point is located at (-5, 1)?

    A. Point L

    B. Point M

    C. Point N

    D. Point P

5. Which of the following would be located in quadrant II? Circle all correct choices.

(5, -3)	(-3, 5)	(5, 3)	(-3, -5)
(-5, 3)	(5, 0)	(-1, 4)	(0, 0)

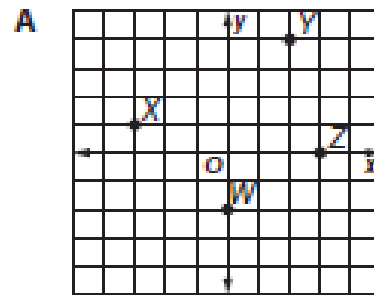**1** Which of the following vertices of rectangle *ABCD* is located in Quadrant III?
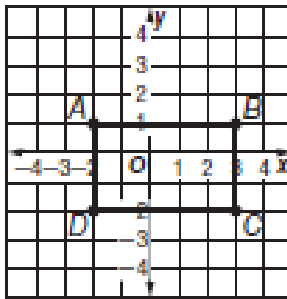
A Point *A* **C** Point *C*

B Point *B* **D** Point *D*

2 A city planner used a coordinate grid to show the locations of parks in a city.
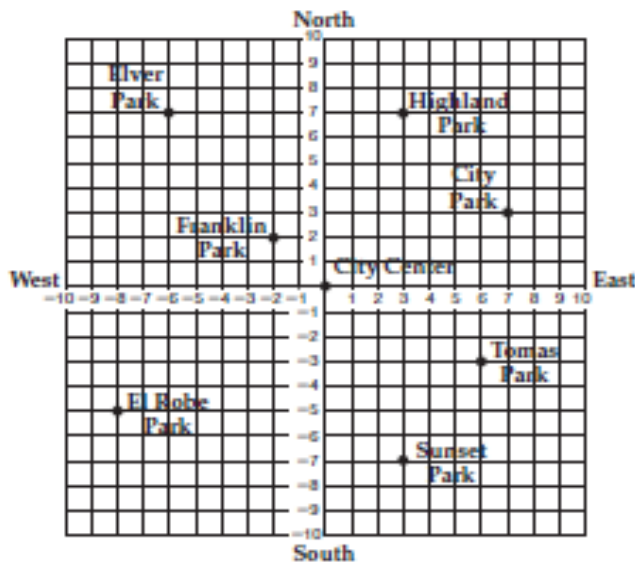
Which ordered pair describes the location of Elver Park?

F (6, −3)

G (7, −3)

H (−8, −5)

J (−6, 7)

3 Which of the following shows point *X* graphed at (1, −3)?
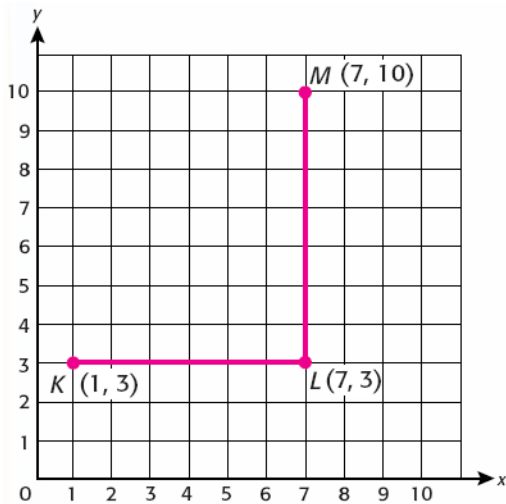
A

B

C

D
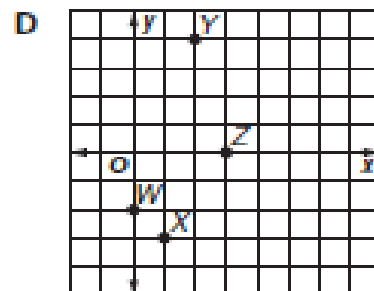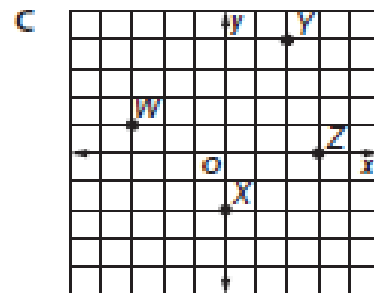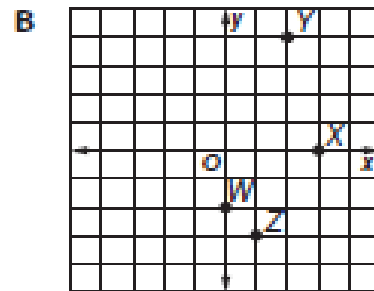
4. What is the ordered pair for point B?
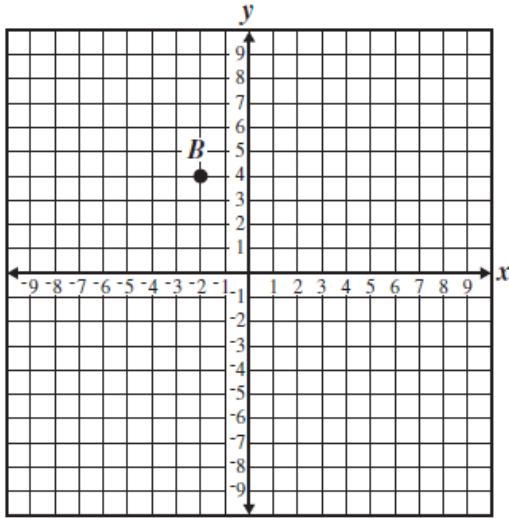
A. (-4, 2)

B. (-2, 4)

C. (2, -4)

D. (2, 4)

5. Points *K*, *L*, and *M* are three of the vertices of rectangle *KLMN*.

A. (7, 7)

B. (1, 10)

C. (10, 3)

D. (10, 1)

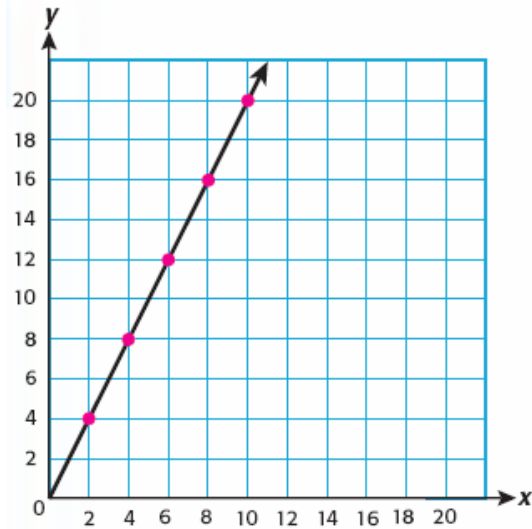6. Use the given numbers to create an ordered pair representing a point in quadrant III.

(☐ , ☐)

| -6 | -2 | 0 | 3 | 5 |

7. Which quadrant is (5, -4) located?

    A. Quadrant I

    B. Quadrant II

    C. Quadrant III

    D. Quadrant IV

8. The graph below represents a linear equation.

Using this graph, which value best represents the y-coordinate if the x-coordinate is 6?
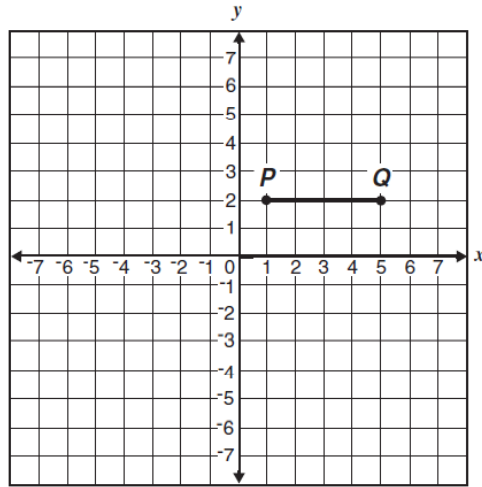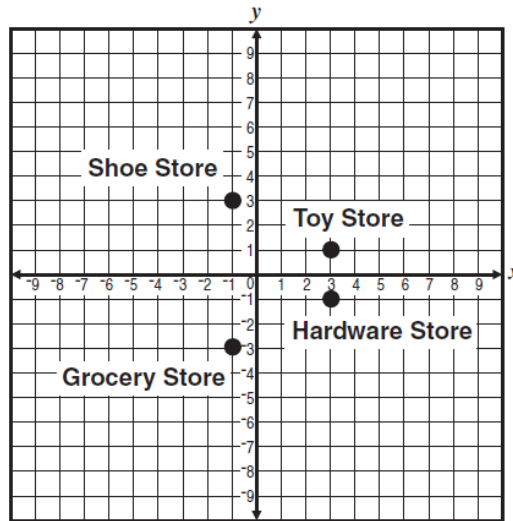
    A. 4

    B. 8

    C. 12

    D. 16

1.

Look at the coordinate grid to the right.

Points *R* and *S* will be added to the grid to form rectangle *PQRS* with an area of 20 square units. Which ordered pairs could be the coordinates of points *R* and *S*?

A (5, −1) and (1, −1)
B (5, −2) and (1, −2
C (5, −3) and (1, −3)
D (5, −4) and (1, −4)

2. The map below shows the location of four different stores.
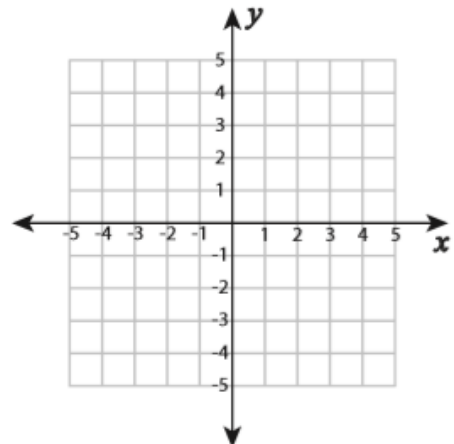

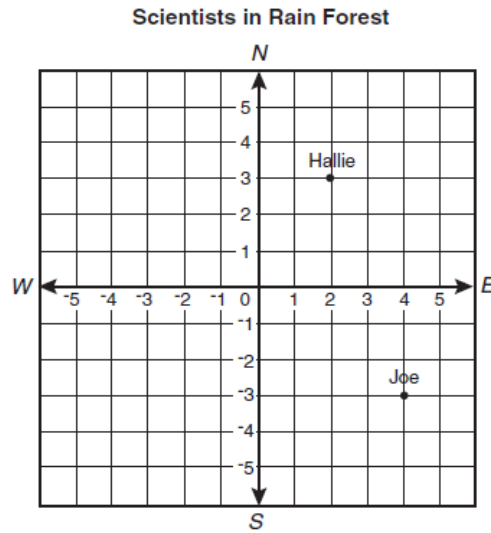What is the length of the line segment from the shoe store to the grocery store?
   A. 3 units
   B. 4 units
   C. 5 units
   D. 6 units

3. Draw a square in this coordinate plane and list the ordered pairs.

   A _____

   B _____

   C _____
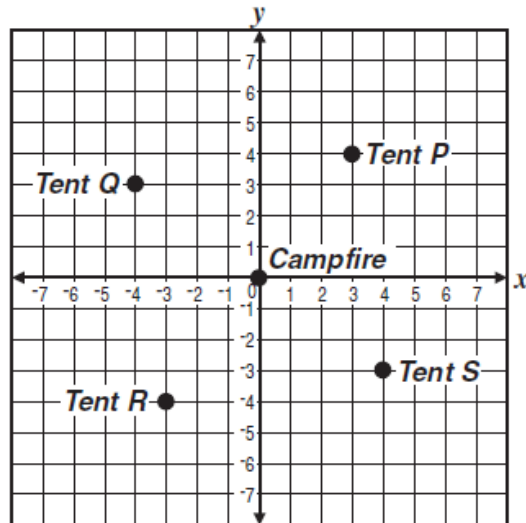
   D _____

4. The map below shows the starting positions of two scientists in a rainforest.

Scientists in Rain Forest

Which ordered pair best names Joe's locations?

A. (3, -4)
B. (-4, 3)
C. (4, -3)
D. (-3, 4)

5. The map shows the locations of four tents around a campfire.

Which tent is located at (4, -3)?
A. Tent P
B. Tent Q
C. Tent R
D. Test S

6.1
A ratio is a comparison of any two quantities. A ratio is used to represent relationships within a quantity and between quantities. Ratios are used in practical situations when there is a need to compare quantities.

1. Write equivalent ratios across each row. All fractions must be simplified.

Using a colon	Using the word "to"	Fraction Notation
5:9		
	3 to 12	
		$\dfrac{2}{7}$

2. Identify all of the ratios that could be used to represent the number of lawns to the number of hours in the following word problem.

John can mow 3 lawns in 6 hours

6:12	6 to 3	3 to 6	6:3	1:2

3. Ms. Larson bought 4 red roses and 16 purple tulips for the front yard. What is the ratio of roses to the total number of flowers?

A. 1:4   B. 4:1   C. 1:5   D. 4:5

4. A pet store has 40 animals for sale and 15 of them are puppies! What is the ratio of animals that are *not* puppies to the total number of animals for sale at the pet store?

A. $\dfrac{5}{8}$ B. $\dfrac{3}{8}$ C. $\dfrac{5}{3}$ D. $\dfrac{8}{5}$

5. At Centerville Middle School, there are 120 students in sixth grade, and 80 of those students are girls. What is the ratio of girls to boys in Centerville's sixth grade?

A. 2 to 3
B. 3 to 2
C. 2 to 1
D. 1 to 2

6. Benjamin has 10 green marbles, 15 red marbles, and 5 yellow marbles in a box. What is the ratio of green marbles to all of the marbles in the box?

A. $\frac{1}{3}$
B. $\frac{1}{2}$
C. $\frac{3}{1}$
D. $\frac{2}{1}$

7. A restaurant sells 40 bowls of soup and 8 bowls of chili each day. What is the ratio of bowls of chili to bowls of soup?

A. 1:5
B. 1:4
C. 1:3
D. 2:5

8. The table shows the number of video games sold at Max's Electronics.

Video Games Sold at Max's Electronics on Saturday

Games	Number Sold
Baseball	12
Car Race	20
Soccer	15
War Zone	8

What is the ratio of War Zone games sold to Baseball games sold?

A. 1 to 2
B. 2 to 3
C. 2 to 5
D. 3 to 4

1. A box contains red marbles and blue marbles. The ratio of red marbles to blue marbles in the box is 8 to 3. Select each statement that could represent the number of red marbles and blue marbles in this box.

    There are exactly 3 red marbles and 8 blue marbles in the box.

    There are exactly 64 red marbles and 24 blue marbles in the box.

    There are exactly 18 red marbles and 13 blue marbles in the box.

    There are exactly 48 red marbles and 18 blue marbles in the box.

2. A board contains stars and triangles. The ratio of triangles to stars is 3 to 1. Select each picture that could represent the number of stars and triangles on this board.
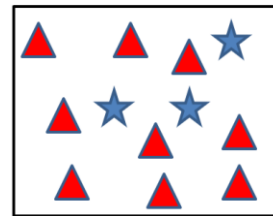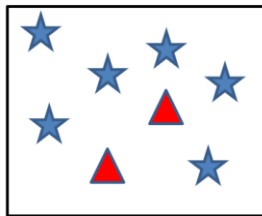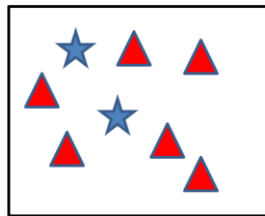
3. There are 5 red candies and 1 blue candy shown in the bag. What is the least number of red and blue candies that can be added to the bag to create a ratio of 3 to 2 for the number of red candies to the number of blue candies?

Key:
R = red
B = blue
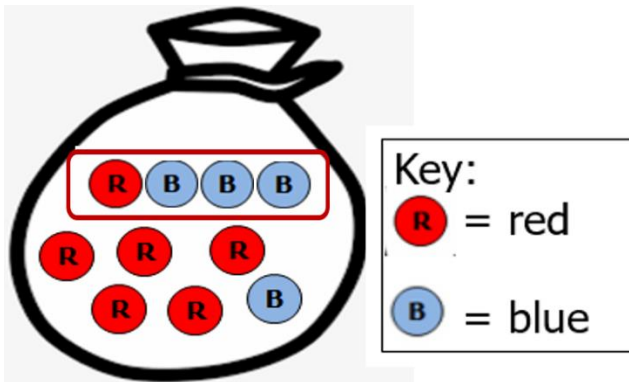
4. Identify each set that has a 1:3 ratio for the number of circles to the number of triangles.

△○△△	○△○○	△△○△△○△△
△○△○△	△○△△△○△	○○△○○△○○

5. Directions: Select the correct answers.

   There are 24 fiction books and 36 nonfiction books on a shelf. Which three ratios represent the relationship of the number of fiction books to the total number of books on the shelf?

$\frac{3}{5}$	2 to 3	2 : 5
2 to 5	2 : 3	3 to 5
3 : 5	$\frac{2}{5}$	$\frac{2}{3}$

6. Identify each picture that has a ratio of 2:3 for the number of triangles to the number of circles.

7. **Part to Part Relationship** Given 3 red cars and 9 blue cars in a parking lot, the ratio of the number of red cars to the number of blue cars can be written as:

3 to 9	9 to 3	1:3	3:1	1 to 3	3:9

8. **Part to Whole Relationship** Given 3 red cars and 9 blue cars in a parking lot, the ratio of the number of red cars to the total number of cars can be written as:

$\frac{1}{4}$	$\frac{3}{12}$	3:12	25%
4:1	12:3	3 to 12	0.25