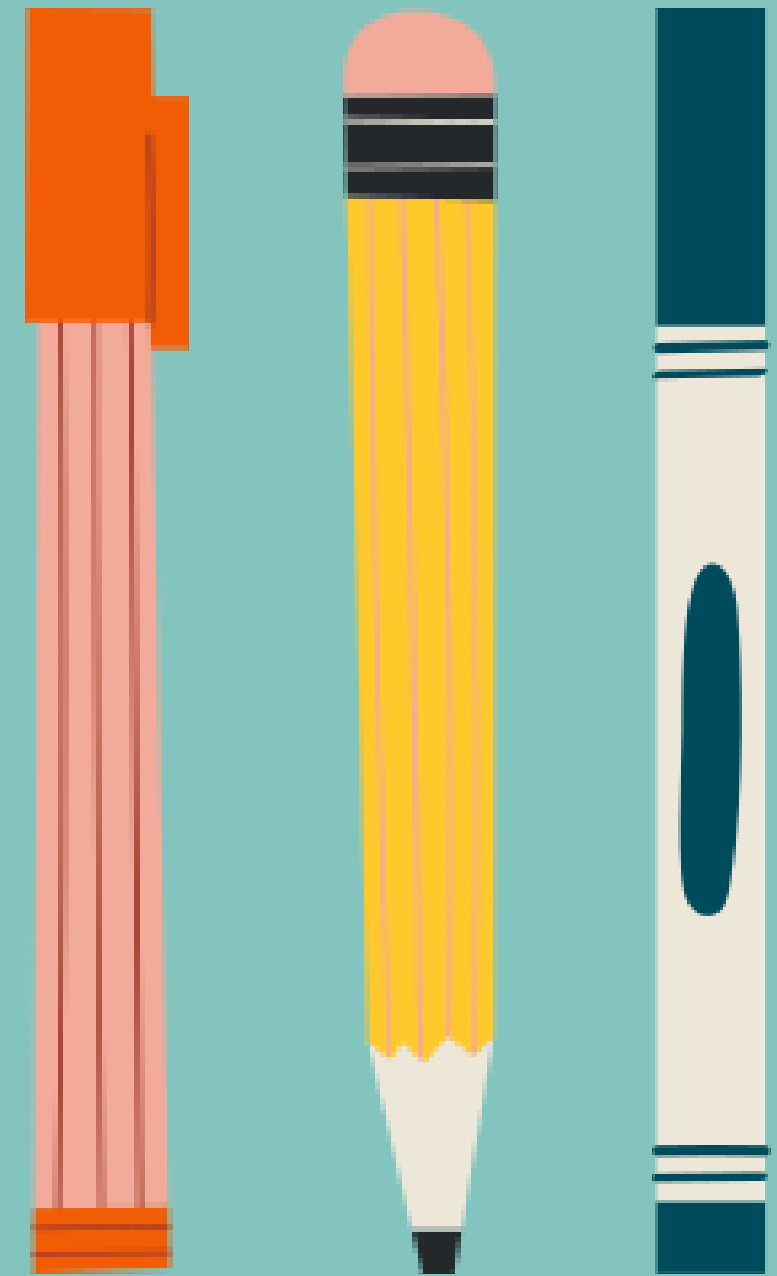


End of Term 2 Revision

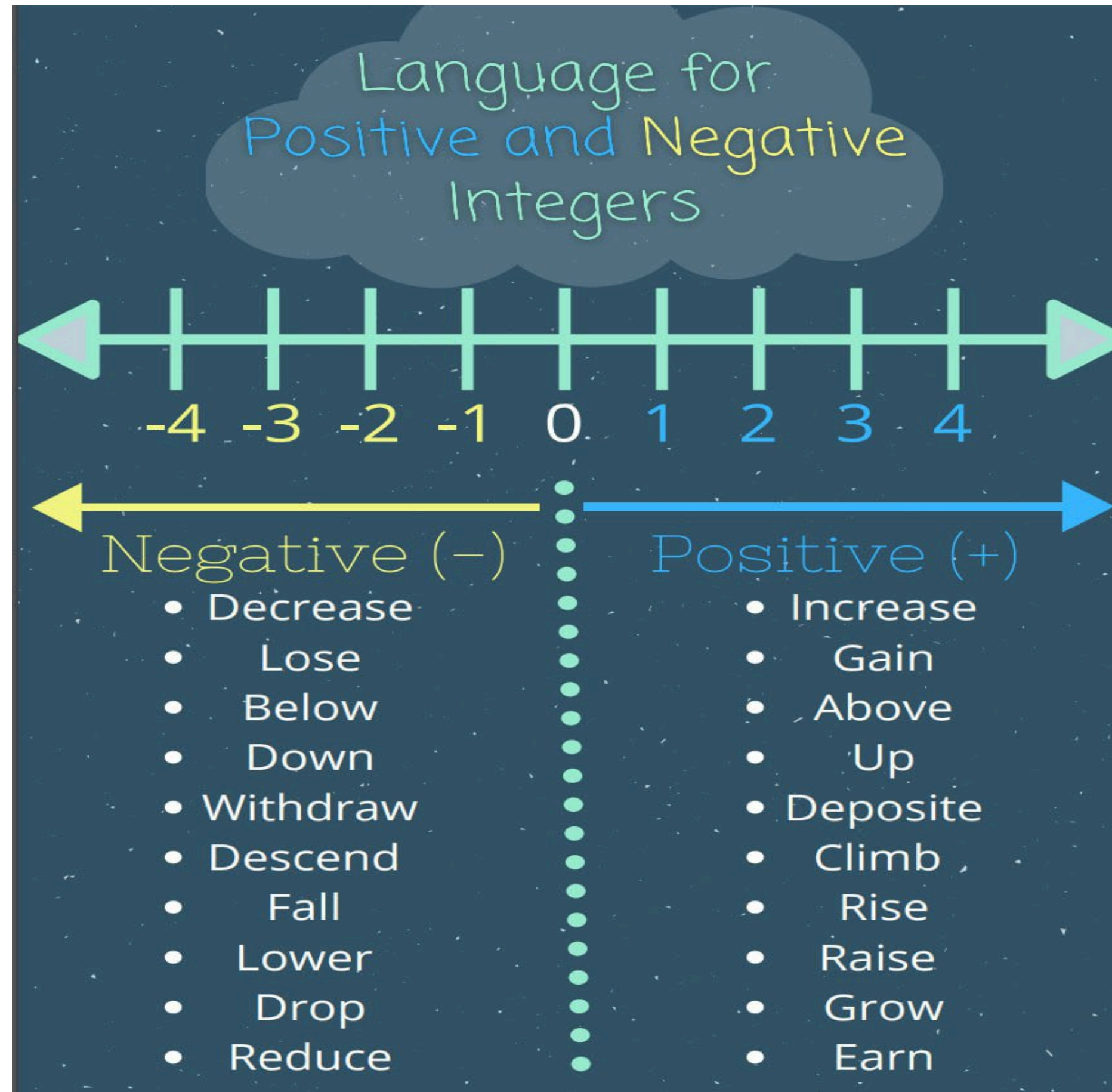
# Math Advanced

Grade 6A



Mrs.Ayat Eraky

# Integers Key word



Memorize!



**Write an integer to represent each situation. Explain the meaning of zero in each situation.** (Example 1)

- |                                                                                        |                                                                    |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| <b>1.</b> Since his last vet appointment, a cat lost 2 ounces.                         | <b>2.</b> On first down, the football team gained 7 yards.         |
| <b>3.</b> Abigail withdrew \$15 from her checking account.                             | <b>4.</b> By noon, the temperature had risen 5 degrees Fahrenheit. |
| <b>5.</b> For the month of January, the amount of snowfall was 3 inches above average. | <b>6.</b> A dolphin is 20 feet below sea level.                    |

Find the opposite of each integer. (Example 1)

1.  $-3$
2.  $2$
3.  $6$

**OPPOSITE OF A NUMBER**  
A number on the other side of 0 on a number line that is the same distance from 0.  
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A horizontal number line with arrows at both ends, labeled from -5 to 5. Tick marks are placed at every integer. A green dot is placed at -4, and a blue dot is placed at 4. A green bracket connects the green dot to the 0 tick mark, and a blue bracket connects the blue dot to the 0 tick mark. Below the number line, the text reads: **-4 and 4 are opposites.**

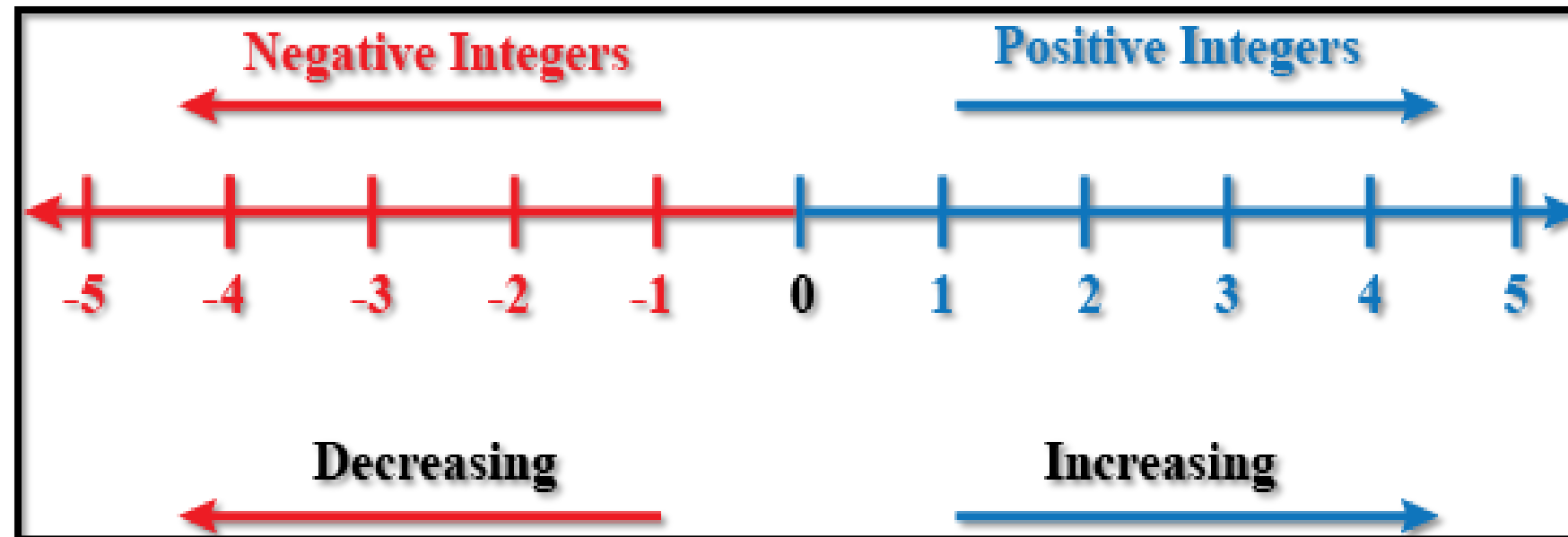
Find each value. (Examples 2 and 3)

6.  $-(-15) =$  \_\_\_\_\_
7.  $-(-11) =$  \_\_\_\_\_
8.  $-[-(-7)] =$  \_\_\_\_\_
9.  $-[-(-1)] =$  \_\_\_\_\_
10.  $-[-(55)] =$  \_\_\_\_\_
11.  $-[-(100)] =$  \_\_\_\_\_

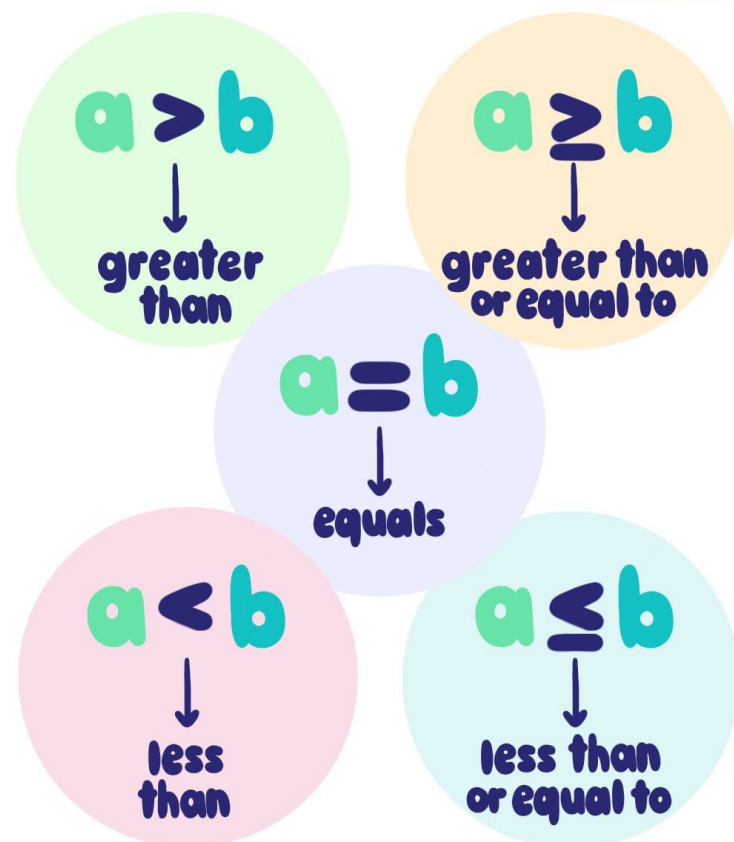
**ABSOLUTE VALUE**  
The distance between the number and 0 on a number line.  
© Kate's Math Lessons

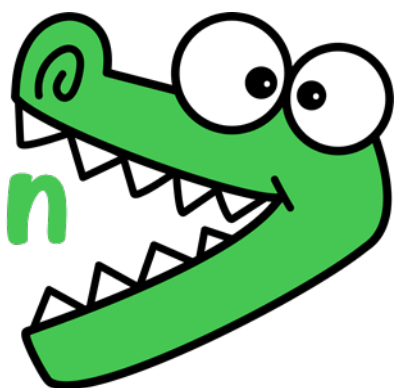
A horizontal number line with arrows at both ends, labeled from -5 to 5. Tick marks are placed at every integer. A green dot is placed at -3, and a blue dot is placed at 4. A green bracket connects the green dot to the 0 tick mark, with the text  **$|-3| = 3$**  below it. A blue bracket connects the blue dot to the 0 tick mark, with the text  **$|4| = 4$**  above it.

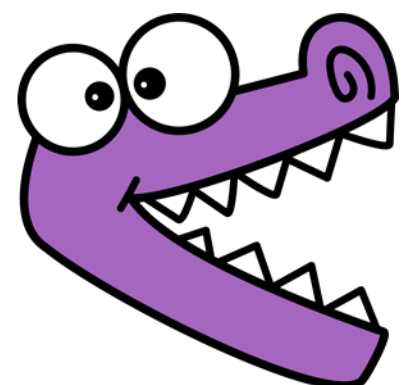
# Comparing Integers



## Inequality Symbols



greater than 

less than 

# Comparing Integers

1. After playing 18 holes of golf, John’s score was  $-4$  and Terry’s score was  $-1$ . Write an inequality to compare the scores. Then explain the meaning of the inequality.

(Example 1)

2. The record low temperature for Buffalo, New York is  $-20^{\circ}\text{F}$ . The record low temperature for Chicago, Illinois is  $-27^{\circ}\text{F}$ . Write an inequality to compare the record low temperatures. Then explain the meaning of the inequality. (Example 1)

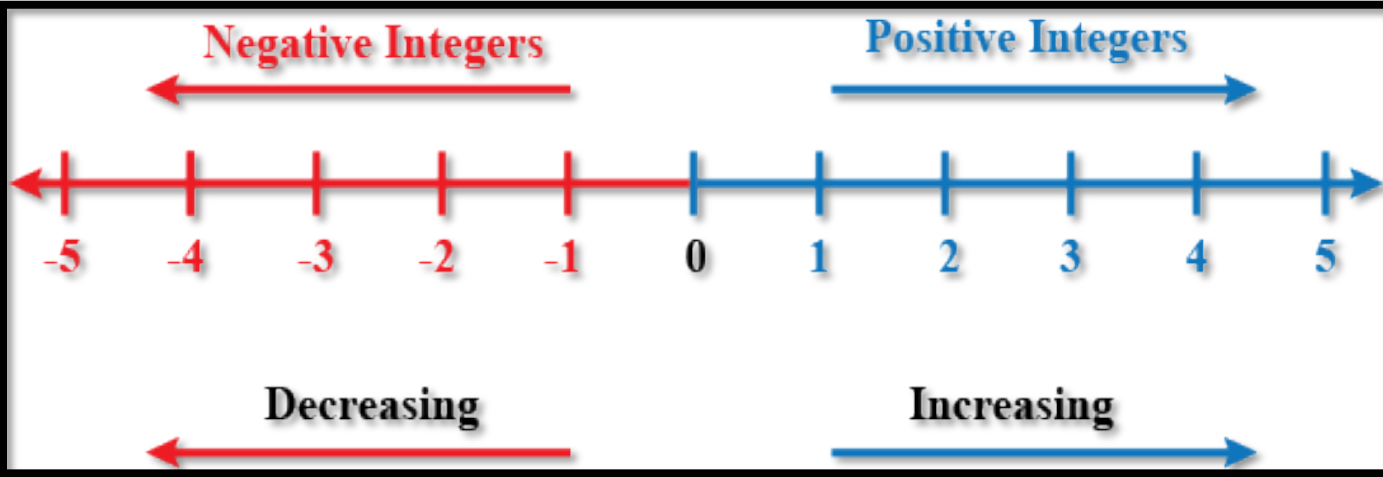
3. The table shows the freezing points for gases. Order the gases from least to greatest according to their freezing points.

(Example 2)

| Gas             | Freezing Points ( $^{\circ}\text{C}$ ) |
|-----------------|----------------------------------------|
| Argon           | $-189$                                 |
| Carbon Monoxide | $-205$                                 |
| Ethane          | $-297$                                 |
| Helium          | $-272$                                 |
| Oxygen          | $-219$                                 |
| Sulfur Dioxide  | $-72$                                  |

4. The table shows the scores for players in a trivia game after the first round. Order the players from least to greatest according to their scores. (Example 2)

| Player | Score |
|--------|-------|
| Ace    | $-11$ |
| Diana  | $3$   |
| Jace   | $-3$  |
| Oneida | $-7$  |
| Nolan  | $5$   |
| Rachel | $1$   |



5. Explain why an elevation less than  $-5$  feet represents a distance from sea level greater than 5 feet. (Example 3)

7. In a golf match, Jesse scored 5 over par, Neil scored 3 under par, Felipe scored 2 over par, and Dawson scored an even par. Order the players from least to greatest score.

6. Explain why a balance of less than  $-\$10$  represents a debt greater than  $\$10$ . (Example 3)

### Test Practice

8. **Table Item** Order the integers from least to greatest.

9,  $-8$ ,  $-2$ , 4,  $-9$

least

greatest

|  |  |  |  |  |
|--|--|--|--|--|
|  |  |  |  |  |
|--|--|--|--|--|

# 214 **Apply**

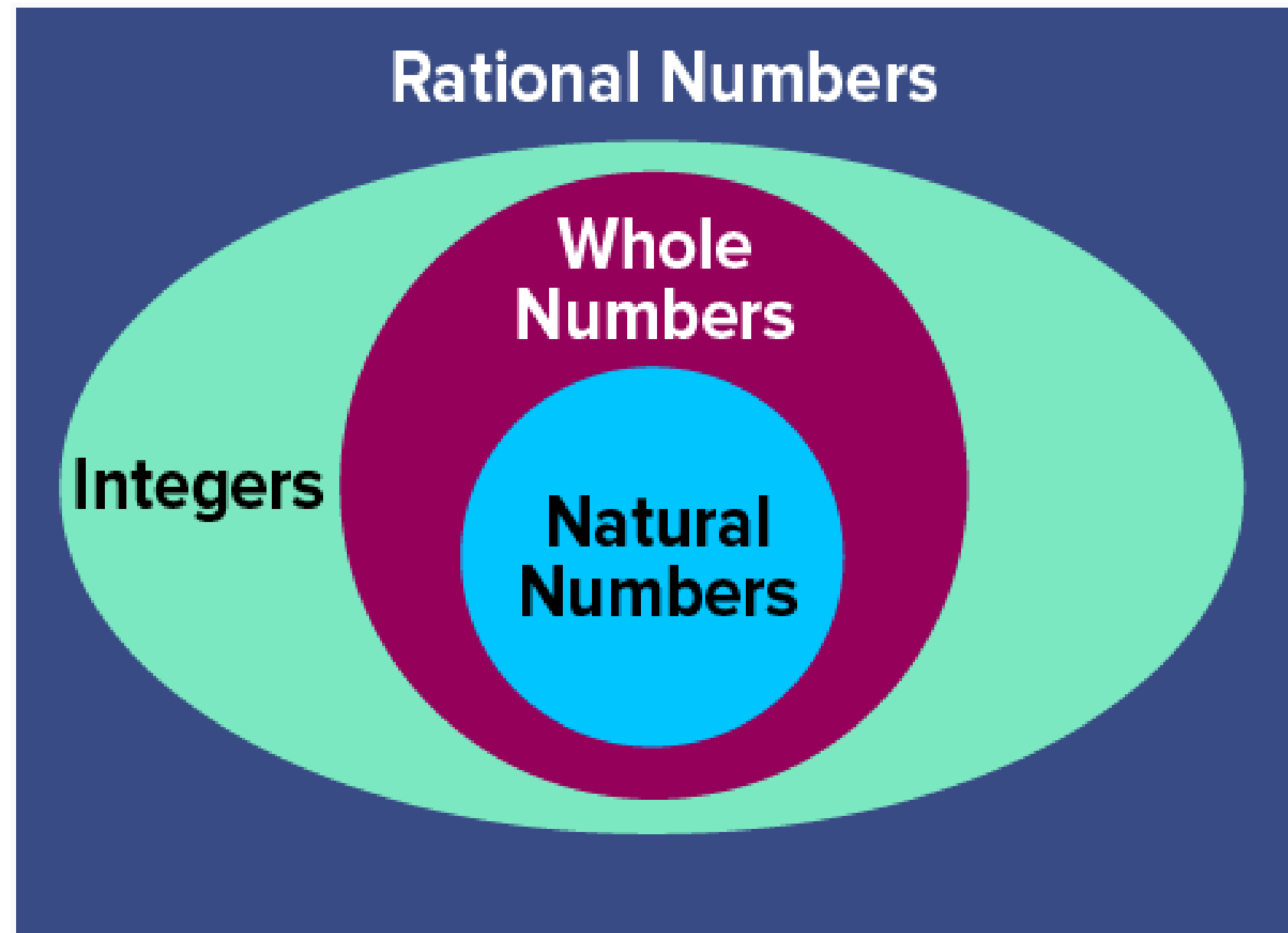
9. The table shows the lowest elevations for several countries. The lowest elevation in the United States is  $-86$  meters. Between the elevations of which two countries is the elevation for the United States?

| Country   | Lowest Elevation (m) |
|-----------|----------------------|
| Argentina | $-105$               |
| China     | $-154$               |
| Egypt     | $-133$               |
| Ethiopia  | $-125$               |
| Libya     | $-47$                |
| Morocco   | $-55$                |

10. A group of students participated in a small business challenge. The table shows results for the students' budgets. The student with the greatest amount under budget wins the challenge. In what place did Dave finish?

| Student | Budget    |
|---------|-----------|
| Casey   | \$2 under |
| Dave    | even      |
| Lily    | \$5 over  |
| Luke    | \$4 over  |
| Mike    | \$1 under |
| Tyrone  | \$6 under |

# Rational Numbers



Fill in the  $\bigcirc$  with  $<$ ,  $>$ , or  $=$  to make a true statement. (Example 3)

5.  $-0.24 \bigcirc -\frac{3}{16}$

6.  $-\frac{5}{8} \bigcirc -0.76$

7.  $-4\frac{4}{25} \bigcirc -4.16$

8.  $-5.52 \bigcirc -5\frac{7}{15}$

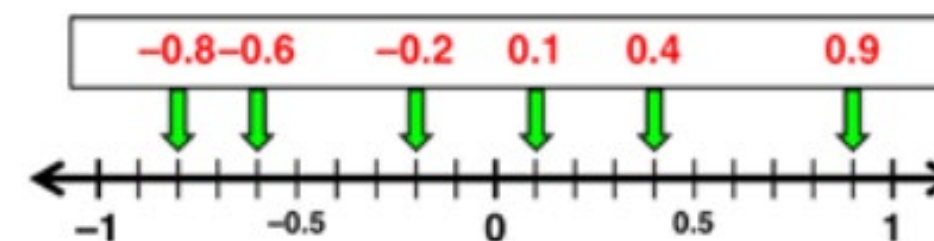
Order each set of rational numbers from least to greatest. (Example 4)

9.  $\left\{-4.25, -4\frac{7}{10}, -4\frac{3}{20}\right\}$

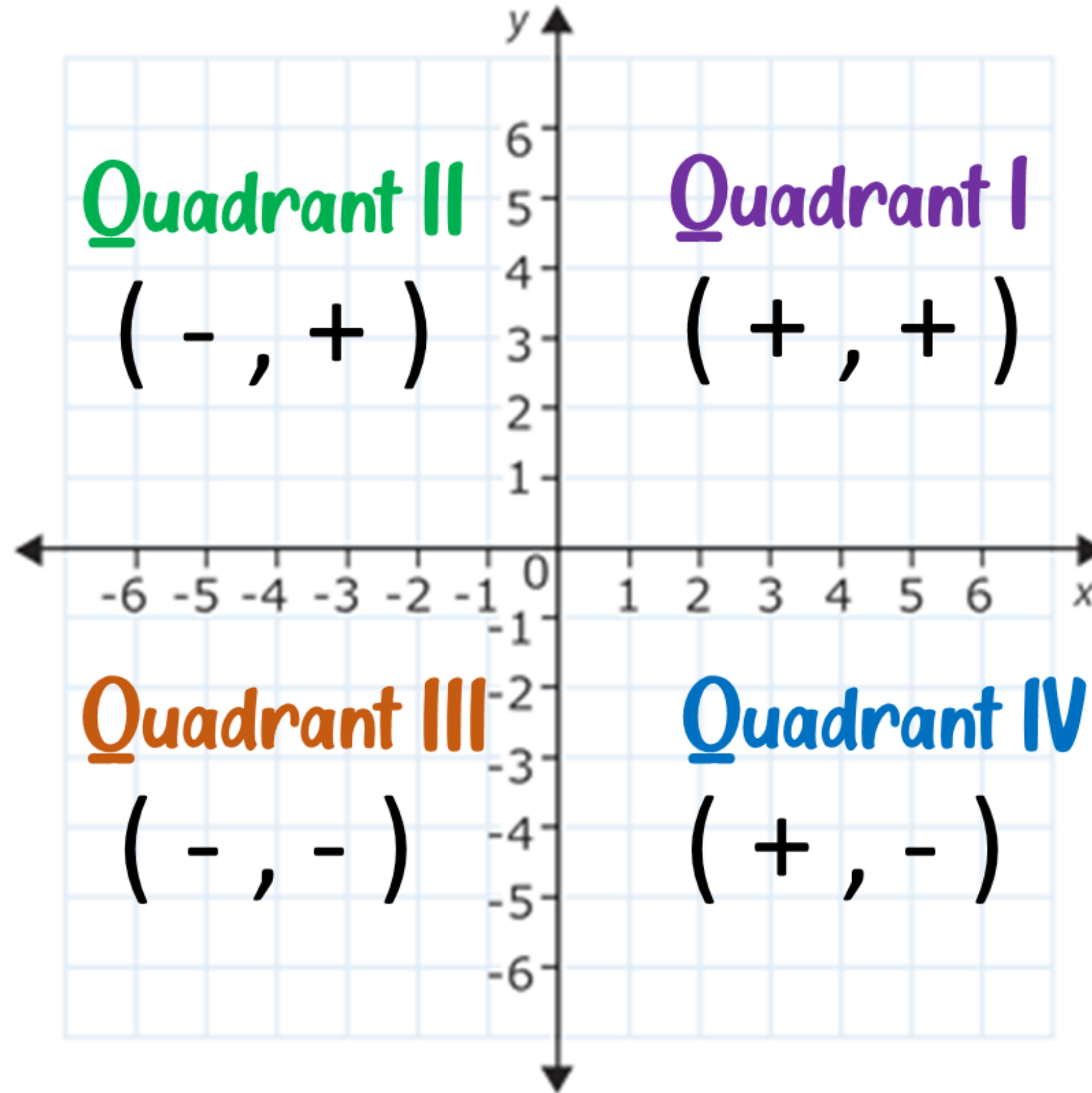
10.  $\left\{-1.55, -1\frac{11}{100}, -1\frac{23}{25}\right\}$

### Ordering Rational Numbers

Write these numbers in order from least to greatest.



# Coordinate Plane



The  Coordinate Plane

Memorize!



Identify the quadrant in which each point is located. (Example 1)

1.  $\left(-1\frac{1}{2}, -2\frac{1}{4}\right)$

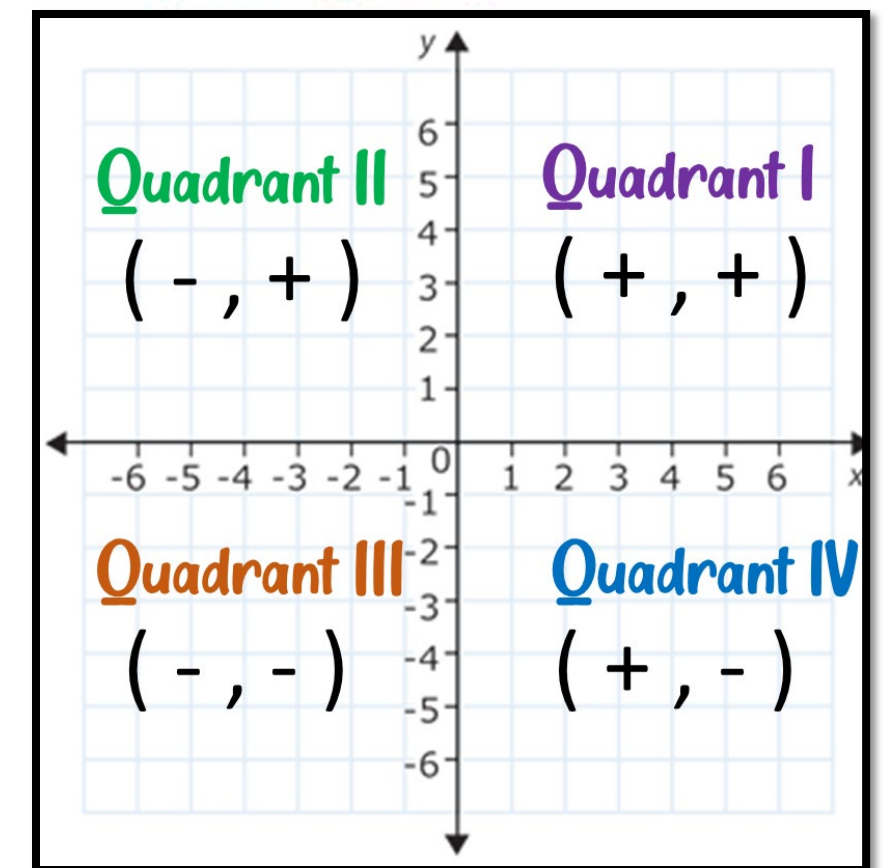
2.  $\left(5\frac{3}{4}, -6\frac{1}{5}\right)$

3.  $\left(\frac{4}{5}, 3\frac{3}{4}\right)$

4.  $\left(-3\frac{1}{2}, 2\frac{4}{5}\right)$

5. Identify the axis on which the point  $\left(-\frac{2}{3}, 0\right)$  is located. (Example 2)

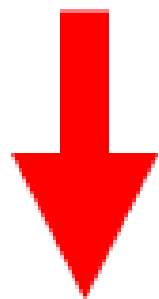
6. Identify the axis on which the point  $\left(0, 6\frac{3}{5}\right)$  is located. (Example 2)



# Reflection on the Coordinate Plane

x-axis

$(x, y)$



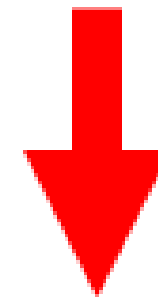
$(x, -y)$

Memorize!



y-axis

$(x, y)$



$(-x, y)$

Write the ordered pair that is a reflection of each point across the  $x$ -axis. (Example 1)

1.  $A\left(-2\frac{3}{4}, 1\right)$

2.  $B\left(1\frac{1}{4}, -\frac{1}{2}\right)$

3.  $C\left(-4, -2\frac{1}{2}\right)$

4.  $D\left(\frac{3}{4}, 3\right)$

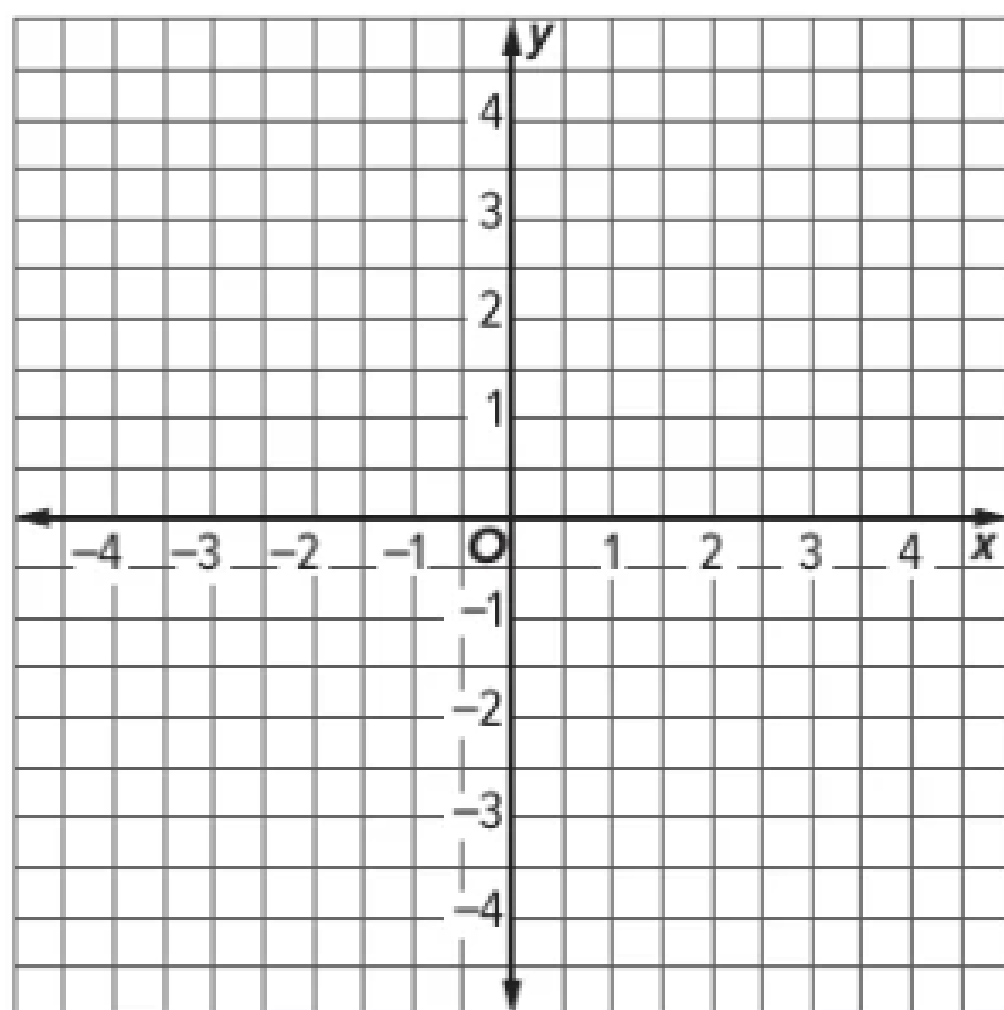
5. Aika is building a square garden. She places a garden post at  $(3.5, 3.5)$ . What is the location of the corner that reflects  $(3.5, 3.5)$  across the  $y$ -axis? (Example 2)

6. A farmer is installing a chicken pen in the shape of a square. He placed a corner of the enclosure at  $(-5.25, -5.25)$ . What is the location of the corner that reflects  $(-5.25, -5.25)$  across the  $y$ -axis? (Example 2)

7. The point  $C'(-4, -2)$  is the result of reflecting  $C(4, -2)$  in the coordinate plane. Identify the axis across which the point was reflected. (Example 3)

8. The point  $B'\left(-5\frac{1}{4}, -3\frac{1}{2}\right)$  is the result of reflecting  $B\left(-5\frac{1}{4}, 3\frac{1}{2}\right)$  in the coordinate plane. Identify the axis across which the point was reflected. (Example 3)

9. Graph point  $Z(-4, -2.5)$  on the coordinate plane. Then graph its reflection across the  $y$ -axis.

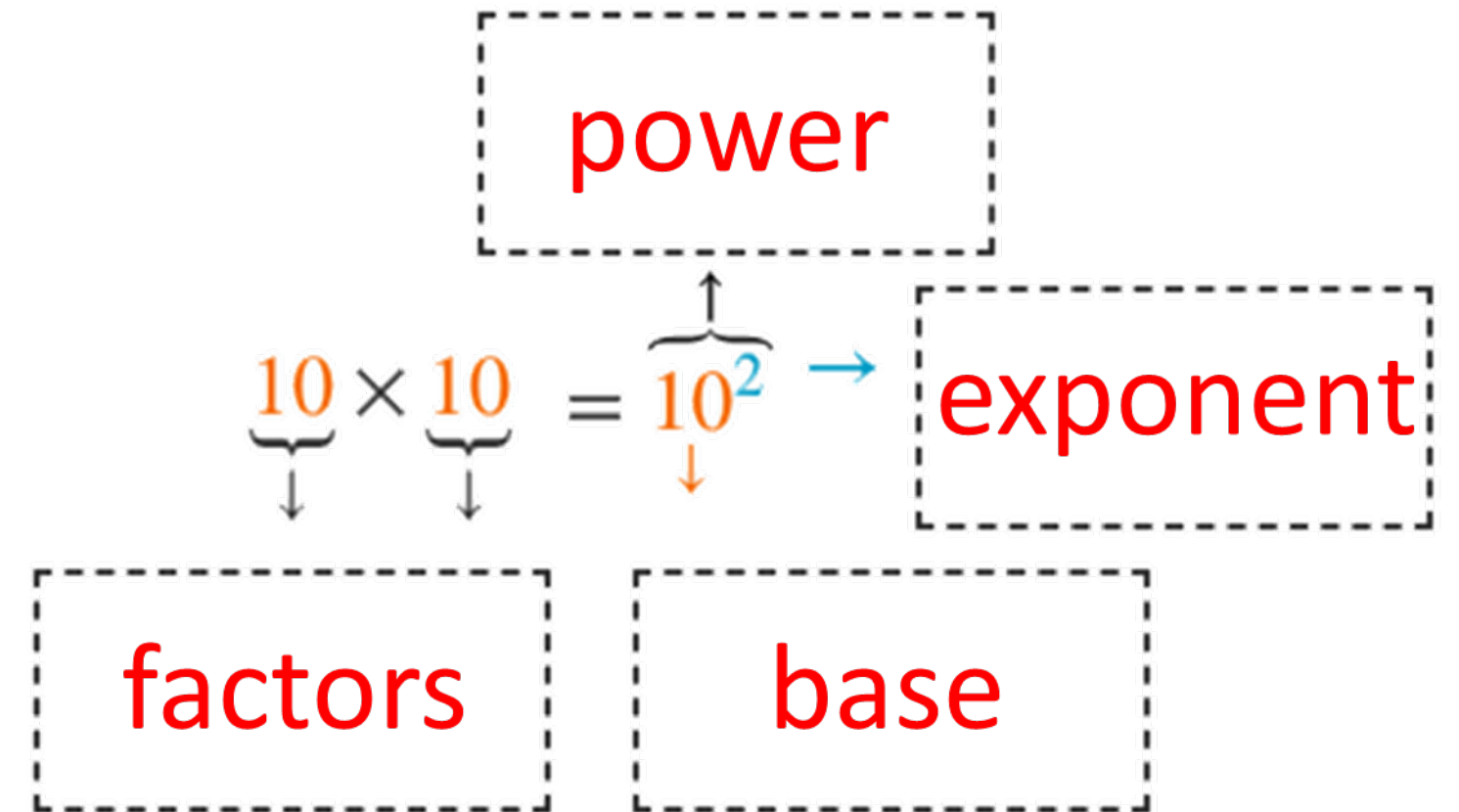
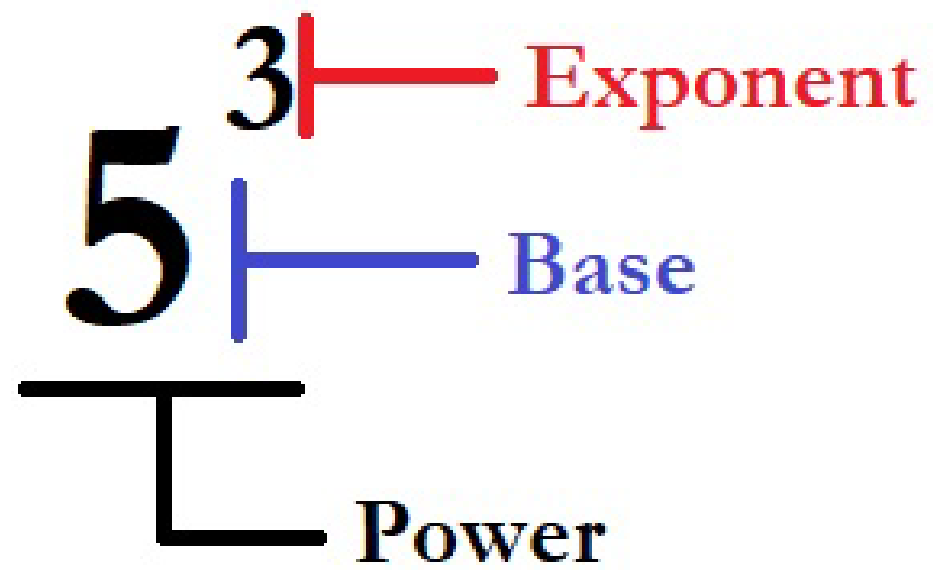


### Test Practice

10. **Multiple Choice** Which ordered pair represents a reflection of point  $Y\left(1\frac{3}{4}, -4\right)$  across the  $x$ -axis?

- Ⓐ  $\left(-4, 1\frac{3}{4}\right)$
- Ⓑ  $\left(1\frac{3}{4}, -4\right)$
- Ⓒ  $\left(1\frac{3}{4}, 4\right)$
- Ⓓ  $\left(-1\frac{3}{4}, 4\right)$

# Powers and Exponents



Write each product using an exponent. (Examples 1 and 2)

1.  $4 \times 4 \times 4$

2.  $3 \times 3 \times 3 \times 3 \times 3$

3.  $15 \times 15 \times 15 \times 15$

4.  $\frac{3}{4} \times \frac{3}{4} \times \frac{3}{4} \times \frac{3}{4} \times \frac{3}{4} \times \frac{3}{4}$

5.  $\frac{1}{3} \times \frac{1}{3} \times \frac{1}{3} \times \frac{1}{3} \times \frac{1}{3} \times \frac{1}{3} \times \frac{1}{3}$

6.  $1.625 \times 1.625$

Evaluate each power. (Examples 3–5)

7.  $5^5 =$  \_\_\_\_\_

8.  $6^3 =$  \_\_\_\_\_

9.  $10^4 =$  \_\_\_\_\_

10.  $\left(\frac{1}{2}\right)^2 =$  \_\_\_\_\_

11.  $\left(\frac{2}{5}\right)^3 =$  \_\_\_\_\_

12.  $\left(\frac{1}{4}\right)^4 =$  \_\_\_\_\_

13.  $(1.5)^3 =$  \_\_\_\_\_

14.  $(0.2)^2 =$  \_\_\_\_\_

15.  $(0.4)^3 =$  \_\_\_\_\_

- 16.** The table shows the approximate area in square miles of the largest and smallest states in the United States. What is the difference between the areas in square miles?

| State        | Area (mi <sup>2</sup> ) |
|--------------|-------------------------|
| Alaska       | $87^3$                  |
| Rhode Island | $39^2$                  |

### Test Practice

- 17. Multiselect** Select all expressions that are equivalent to  $7 \times 7 \times 7 \times 7$ .

☐  $4^7$

☐  $7^4$

☐  $7^7$

☐ 28

☐ 2,401

☐ 16,384

# Order of Operation

# ORDER →

always work **LEFT** → **RIGHT**

| order ↓         | GROUPING symbols           | PRACTICE ↘                                                                                                                                                                        |
|-----------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 <sup>st</sup> | Parentheses ( )<br>parents | $[6-2] \times 3^2 + 10 \div (9-4)$<br>$[6-2] \times 3^2 + 10 \div 5$<br>$4 \times 3^2 + 10 \div 5$<br>$4 \times 9 + 10 \div 5$<br>$36 + 10 \div 5$<br>$36 + 2 = \textcircled{38}$ |
| 2 <sup>nd</sup> | Brackets [ ]<br>brother    |                                                                                                                                                                                   |
| 3 <sup>rd</sup> | Braces { }<br>baby         |                                                                                                                                                                                   |



|   |         |           |
|---|---------|-----------|
| G | Grandma | Grouping  |
| E | Excused | Exponents |
| M | My      | Multiply  |
| D | Dear    | Divide    |
| A | Aunt    | Add       |
| S | Sally   | Subtract  |

**G**rouping ( )

**E**xponents  $x^3$

**M**ultiply  $\times$

OR  
**D**ivide  $\div$

OR  
**A**dd  $+$

**S**ubtract  $-$

Memorize!



|             |                              |                                                 |                                         |          |          |
|-------------|------------------------------|-------------------------------------------------|-----------------------------------------|----------|----------|
| <b>( )</b>  | <b><math>\times^2</math></b> | <b><math>\times</math> or <math>\div</math></b> | <b><math>+</math> or <math>-</math></b> |          |          |
| Parentheses | Exponents                    | Multiply                                        | Divide                                  | Add      | Subtract |
| <b>P</b>    | <b>E</b>                     | <b>M</b>                                        | <b>D</b>                                | <b>A</b> | <b>S</b> |

Evaluate each expression. (Examples 1 and 2)

**1.**  $64 \div (15 - 7) \times 2 - 9$

**2.**  $9 + 8 \times 3 - (5 \times 2)$

**3.**  $4 \times (5^2 - 12) - 6$

**4.**  $78 - 2^4 \div (14 - 6) \times 2$

**5.**  $9 + 7 \times (15 + 3) \div 3^2$

**6.**  $13 + (4^3 \div 2) \times 5 - 17$

**7.**  $4 + \left(6^2 \div \frac{1}{4}\right) \times 3$

**8.**  $12 + \left(2^3 \div \frac{2}{3}\right) - 2$

**9.**  $36 \div \left(3^2 \div \frac{3}{4}\right) - 2.4$

**10.**  $80 \div \left(4^2 \div \frac{2}{5}\right) + 3.75$

# Parts of Algebraic Expressions

1.  $4e + 7e + 5 + 2e$

terms:  $4e, 7e, 5, 2e$

like terms:  $4e, 7e, 2e$

coefficients:  $4, 7, 2$

constant:  $5$

Terms

$$5x - 3$$

Coefficient

Variable

Constant

Memorize!



**Example 1** Identify Parts of Algebraic Expressions

Identify the terms, like terms, coefficients, and constants in the expression  $6n + 7n + 4 + 2n$ .

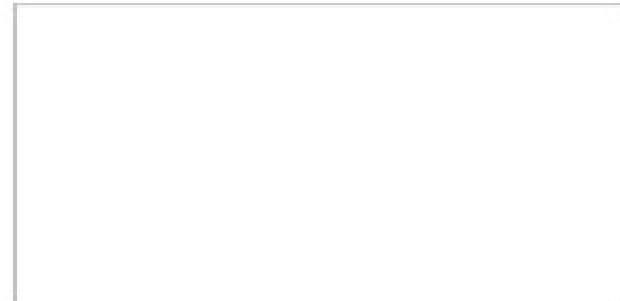
Terms are parts of the expression that are separated by addition and subtraction, so the terms are:

$$6n, 7n, 4, 2n$$

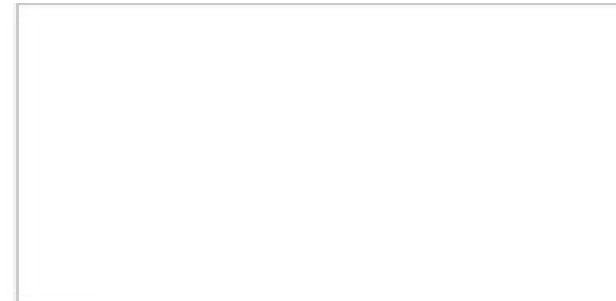
Circle the like terms above.

Write the coefficients of the terms and the constants in the appropriate bin.

**Coefficients**



**Constants**



So, the terms are  $6n$ ,  $7n$ ,  $4$ , and  $2n$ .

The like terms are  $6n$ ,  $7n$ , and  $2n$ .

The coefficients are 6, 7, and 2.

The constant is 4.

Identify the terms, like terms, coefficients, and constants in each expression. [\(Example 1\)](#)

1.  $4e + 7e + 5 + 2e$

2.  $5a + 2 + 7 + 6a$

3.  $4 + 4y + y + 3$

# Algebraic Expressions Key Words

## Words to Math Symbols

+

Above  
Add  
Altogether  
And  
Ascend  
Deposit  
Grew  
Gain  
Increase  
Longer than  
More  
Plus  
Save  
Sum  
Total

-

Below  
Decline  
Decrease  
Descend  
Difference  
Discount  
Fewer  
Less  
Minus  
Shorter than  
Subtract  
Take away  
Withdraw  
Lost  
Remove

×

Double  
Every  
Half  $\left(\times \frac{1}{2}\right)$   
Of  
Product  
Times  
Triple  
Twice

÷

Distribute  
Divide  
Find each  
Find per  
Quotient  
Share  
Split into

Memorize!



**For each verbal phrase, define a variable to represent the unknown quantity. Then write the phrase as an algebraic expression.** (Examples 2–4)

**4.** three more pancakes than Hector ate

**5.** twelve fewer questions than were on the first test

**6.** two and one-half times the number of minutes spent exercising

**7.** one-third the number of yards

**8.** four less than seven times Lynn's age

**9.** \$2.50 more than one-fourth the cost of a pizza

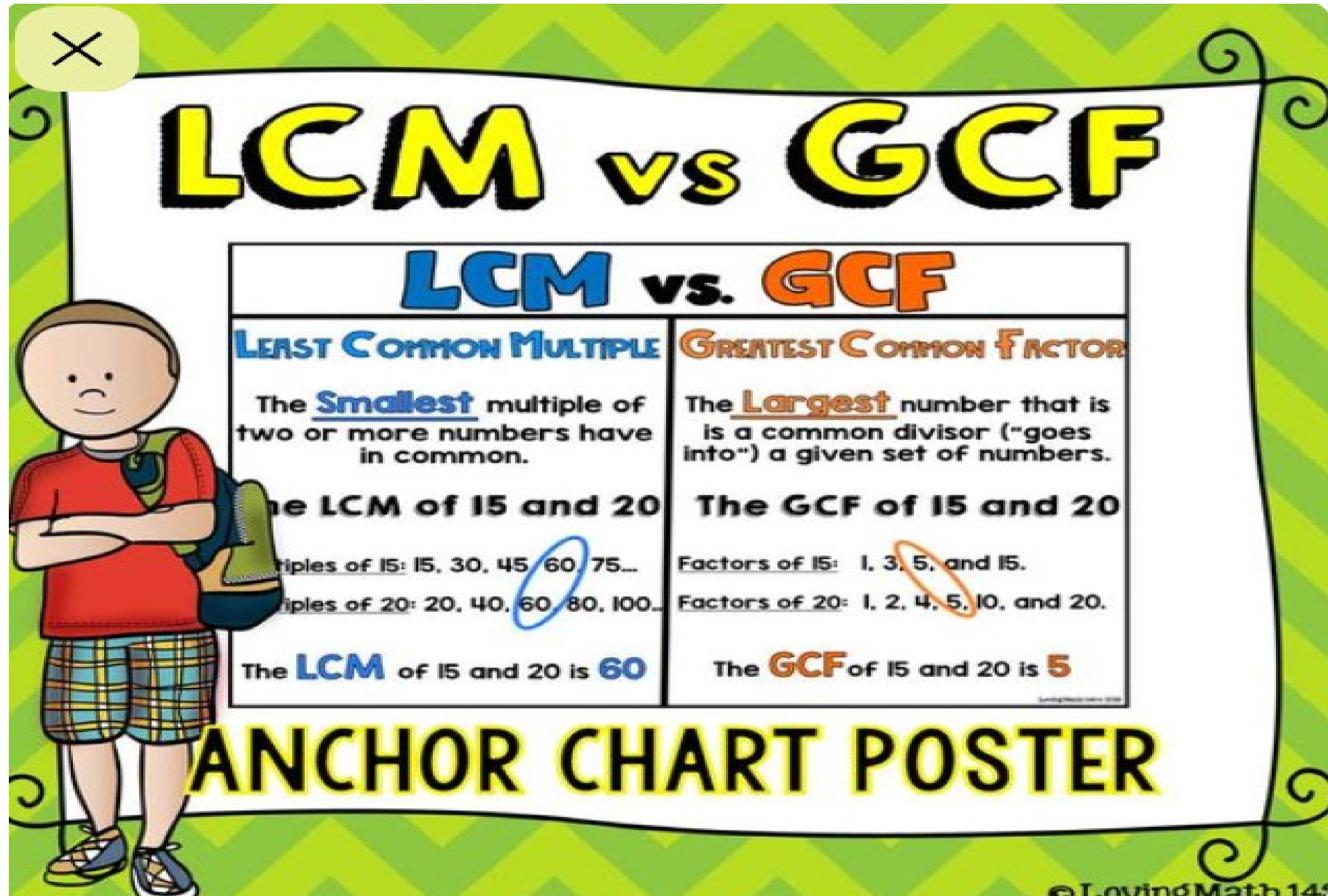
**10.** A plumber charges \$50 to visit a house plus \$40 for every hour of work. Define a variable to represent the unknown quantity. Then write an expression to represent the total cost of hiring a plumber. (Example 4)

**11.** A gymnastics studio charges an annual fee of \$35 plus \$20 per class. Define a variable to represent the unknown quantity. Then write an expression to represent the total cost of taking classes. (Example 4)

**12.** A rectangle has a length that is half its width. Define a variable to represent the unknown quantity. Then write an expression to represent the perimeter of the rectangle. (Example 5)

**13.** In a triangle there are two sides that have the same length and the third side is 1.5 times longer than the length of the other two. Define a variable to represent the unknown quantity. Then write an algebraic expression to represent the perimeter of the triangle. (Example 5)

# G.C.F & L.C.M



The image shows a colorful anchor chart poster titled "LCM vs GCF" in large yellow letters. The poster is set against a green and yellow chevron background. On the left, a cartoon boy with a backpack stands next to the chart. The chart itself is a white rectangle with a black border, divided into two columns. The left column is titled "LCM" in blue and "GCF" in orange. The right column is titled "LCM" in blue and "GCF" in orange. The left column explains the Least Common Multiple (LCM) as the smallest multiple of two or more numbers, using the example of 15 and 20, where the LCM is 60. The right column explains the Greatest Common Factor (GCF) as the largest number that is a common divisor of two or more numbers, using the example of 15 and 20, where the GCF is 5. The poster is labeled "ANCHOR CHART POSTER" at the bottom in large yellow letters. A small copyright notice "©LovingMath145" is visible in the bottom right corner.

**LCM vs GCF**

| LCM                                                                 | GCF                                                                                      |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| <b>LEAST COMMON MULTIPLE</b>                                        | <b>GREATEST COMMON FACTOR</b>                                                            |
| The <u>Smallest</u> multiple of two or more numbers have in common. | The <u>Largest</u> number that is a common divisor ("goes into") a given set of numbers. |
| <b>The LCM of 15 and 20</b>                                         | <b>The GCF of 15 and 20</b>                                                              |
| Multiples of 15: 15, 30, 45, 60, 75...                              | Factors of 15: 1, 3, 5, and 15.                                                          |
| Multiples of 20: 20, 40, 60, 80, 100...                             | Factors of 20: 1, 2, 4, 5, 10, and 20.                                                   |
| The <b>LCM</b> of 15 and 20 is <b>60</b>                            | The <b>GCF</b> of 15 and 20 is <b>5</b>                                                  |

**ANCHOR CHART POSTER**

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 **Example 3** Find the LCM by Using a List of Multiples

Ernesto is at the community center every 8 weeks for his painting class. Kamala is at the community center every 6 weeks for her pottery class. They were both at the center for their classes this week.

**How many weeks will it be until they both have their classes in the same week again?**

**Step 1** List the multiples of each number.

multiples of 8: \_\_\_\_\_

multiples of 6: \_\_\_\_\_

**Step 2** Identify the least common multiple.

Circle the multiples that 8 and 6 have in common.

multiples of 8: 8, 16, 24, 32, 40, 48, 56, 64...

multiples of 6: 6, 12, 18, 24, 30, 36, 42, 48...

least common multiple: \_\_\_\_\_

So, Ernesto and Kamala have their classes in the same week again in 24 weeks.

7. On every fourth visit to the hair salon, Margot receives a discount of \$5. On every tenth visit, she receives a free hair product. After how many visits will Margot receive the discount and a free product at the same time? (Example 3)

8. The table shows the city bus schedule for certain bus lines. Both buses are at the bus stop right now. In how many minutes will both buses be at the bus stop again? (Example 3)

| Bus Line | Arrives at the bus stop every... |
|----------|----------------------------------|
| A        | 25 minutes                       |
| B        | 15 minutes                       |

Use any method to find the least common multiple of each pair of numbers. (Example 4)

9. 4, 6

10. 3, 5

# Distributive Property


$$\begin{aligned} &= 3(x + 8) \\ &= 3(x) + 3(8) \\ &= 3x + 24 \end{aligned}$$

Use the Distributive Property to expand each algebraic expression. (Example 1)

1.  $3(x + 8)$

2.  $5(6 + x)$

3.  $9(3 + x)$

Use the Distributive Property to simplify each expression. (Example 2)

4.  $12 \cdot 3\frac{3}{4}$

5.  $15 \cdot 2\frac{2}{3}$

6.  $8 \cdot 4\frac{1}{2}$

# Equations

## Inverse Operations

Inverse means opposite

Operation

Inverse



Addition

$$5 + 4 = 9$$

$$4 + 5 = 9$$



Subtraction

$$9 - 5 = 4$$

$$9 - 4 = 5$$



Subtraction

$$10 - 3 = 7$$

$$10 - 7 = 3$$



Addition

$$7 + 3 = 10$$

$$3 + 7 = 10$$



Multiplication

$$2 \times 8 = 16$$

$$8 \times 2 = 16$$



Division

$$16 \div 8 = 2$$

$$16 \div 2 = 8$$



Division

$$15 \div 5 = 3$$

$$15 \div 3 = 5$$



Multiplication

$$5 \times 3 = 15$$

$$3 \times 5 = 15$$

Solve each equation. Check your solution. (Examples 2 and 3)

5.  $12 = 6x$

6.  $3z = 15$

7.  $\frac{3}{4}z = \frac{2}{3}$

8.  $\frac{1}{2} = \frac{5}{8}w$

9.  $60.536 = 9.2j$

### Test Practice

10. **Equation Editor** Solve  $3.9x = 16.068$ .

|   |   |   |   |   |
|---|---|---|---|---|
| ← | → | ↶ | ↷ | ✕ |
| 1 | 2 | 3 |   |   |
| 4 | 5 | 6 |   |   |
| 7 | 8 | 9 |   |   |
| 0 | . | - |   |   |

Solve each equation. Check your solution. (Examples 2 and 3)

5.  $6 = \frac{j}{8}$

6.  $\frac{k}{7} = 7$

7.  $\frac{z}{4} = \frac{2}{3}$

8.  $\frac{1}{2} = \frac{w}{8}$

9.  $5.31 = \frac{p}{9.2}$

### Test Practice

10. **Equation Editor** Solve  $\frac{x}{1.3} = 1.94$ .

|   |   |   |   |   |
|---|---|---|---|---|
| ← | → | ↶ | ↷ | ✖ |
| 1 | 2 | 3 |   |   |
| 4 | 5 | 6 |   |   |
| 7 | 8 | 9 |   |   |
| 0 | . | - |   |   |

# Written Part

# Inequality

## Key Words for Solving Inequalities

$>$

- Is greater than
- Is more than
- Exceeds
- Is over
- Is above
- Is larger than
- Is longer than
- Is higher than

$\geq$

- Is greater than or equal to
- Is at least
- Is not less than
- Is not under
- Has minimum value
- Is more than or equal to

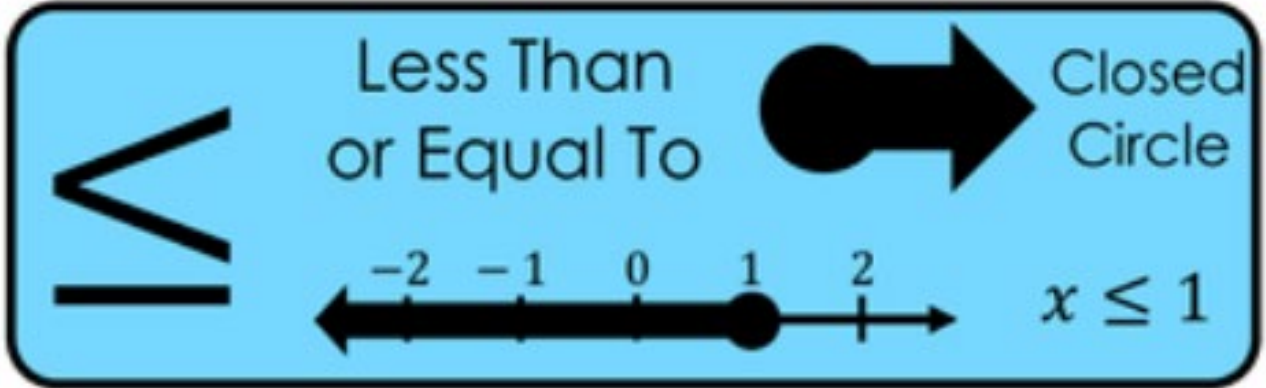
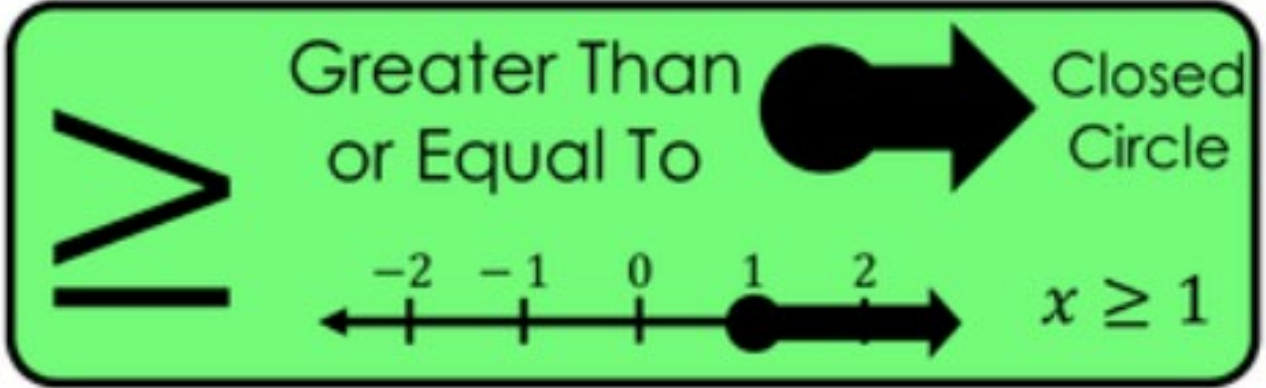
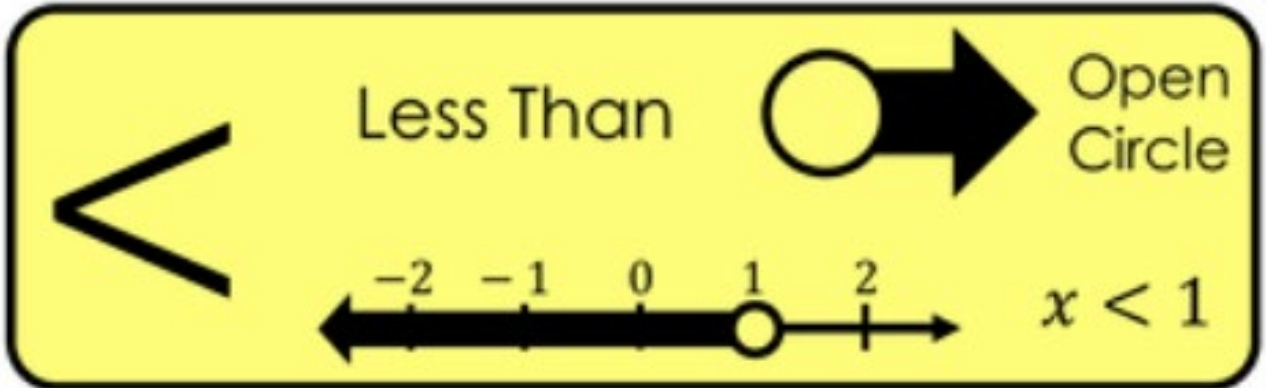
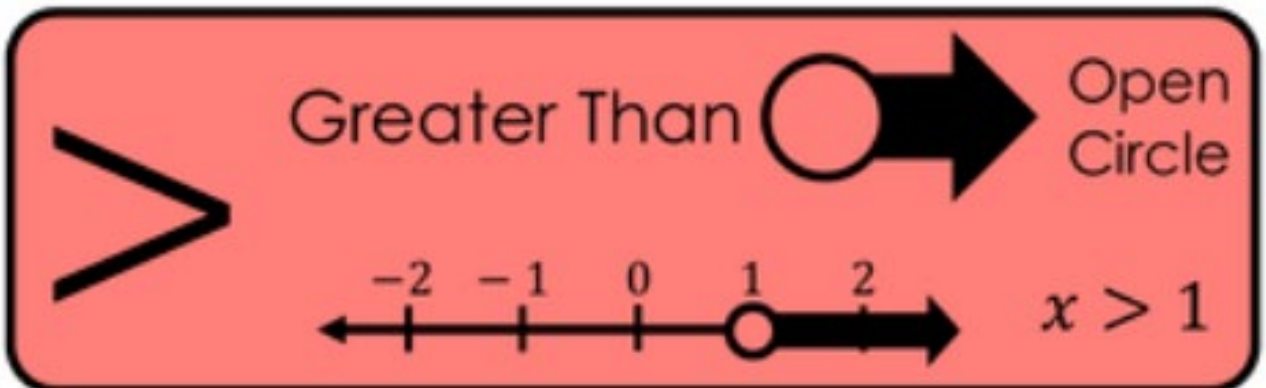
$<$

- Is less than
- Is under
- Is fewer than
- Is smaller than
- Is below
- Is shorter than
- Is beneath
- Is lower than

$\leq$

- Is less than or equal to
- Is at most
- Is not greater than
- Does not exceed
- Has maximum value
- Is no more than

## INEQUALITIES

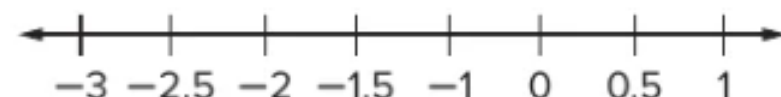


1. The minimum deposit for a new checking account is \$75. Write an inequality to represent the amounts in dollars  $a$  that could be deposited in a new checking account. (Example 1)

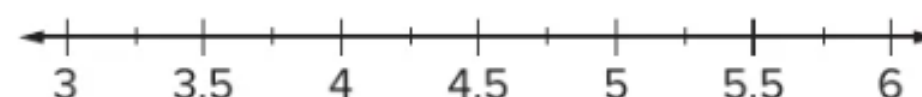
2. To win a medal in a 5K race, a runner's time must be less than 22 minutes. Write an inequality to represent the times in minutes  $m$  that would win a medal. (Example 1)

Graph each inequality on the number line. (Examples 2 and 3)

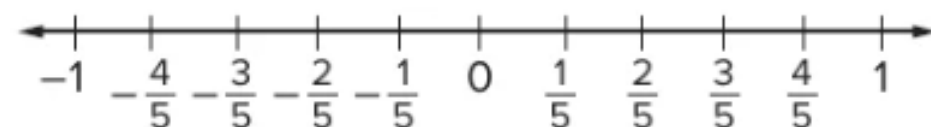
3.  $b < -1.5$



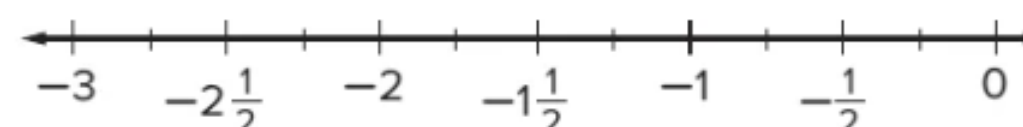
4.  $d \geq 4.75$



5.  $a > \frac{4}{5}$



6.  $d \leq -2\frac{1}{4}$



7. Which of the following are solutions of the inequality  $t + 7 \leq 12$ : 4, 5, 6? (Example 4)

8. Which of the following are solutions of the inequality  $h - 4 > 9$ : 12, 13, 14? (Example 4)

9. Which of the following are solutions of the inequality  $8r \geq 1.8$ :  $\frac{1}{5}$ ,  $\frac{1}{4}$ ,  $\frac{1}{3}$ ? (Example 5)

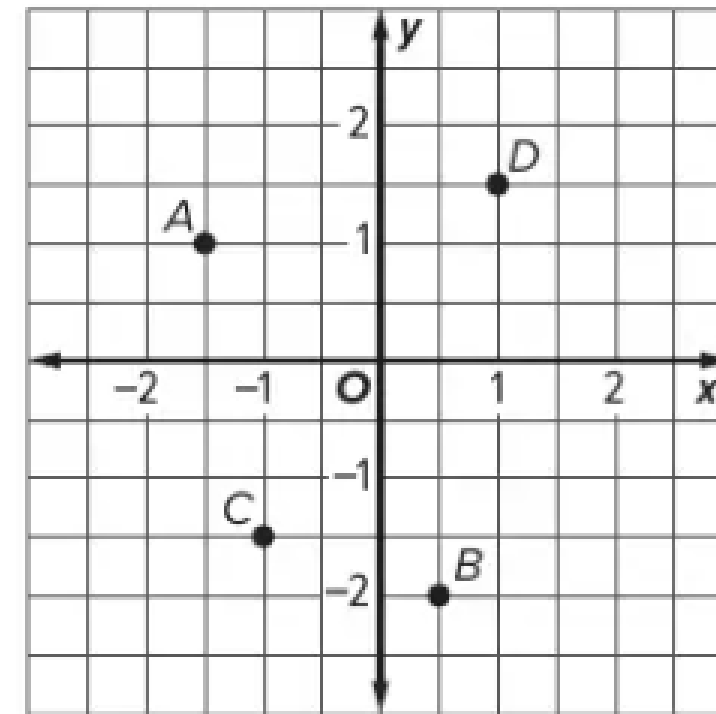
10. Which of the following are solutions of the inequality  $\frac{2.4}{n} < 6$ : 0.25, 0.4, 0.5? (Example 5)

Use the coordinate plane. Identify the ordered pair that names each point. (Example 3)

7. *A* \_\_\_\_\_

8. *B* \_\_\_\_\_

9. *C* \_\_\_\_\_

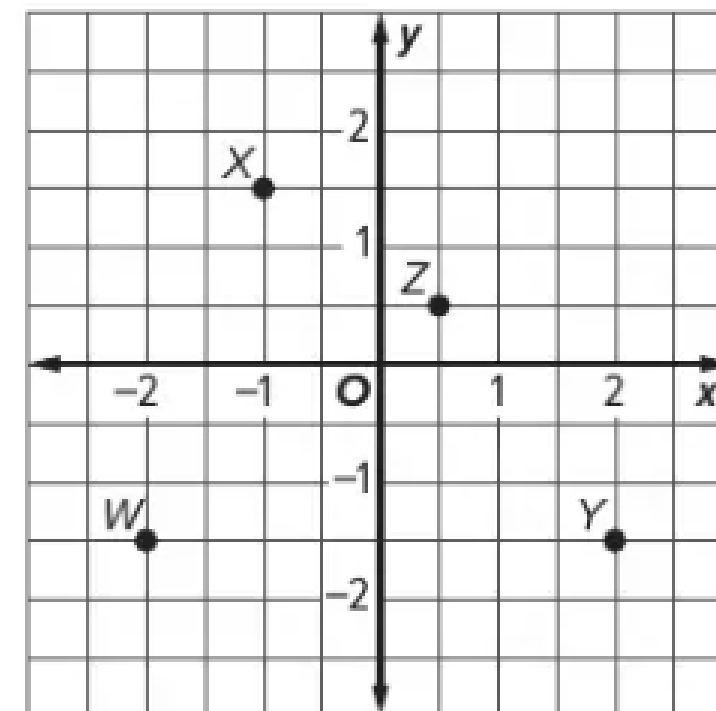


Use the coordinate plane. Identify the point for each ordered pair. (Example 4)

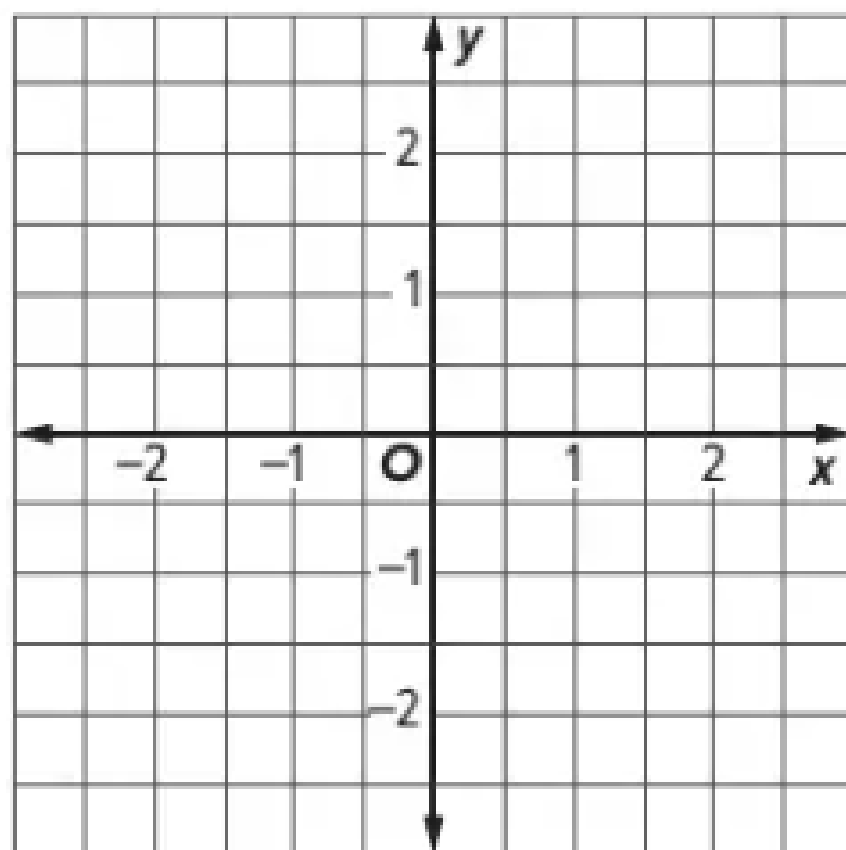
10.  $\left(\frac{1}{2}, \frac{1}{2}\right)$  \_\_\_\_\_

11.  $\left(-1, 1\frac{1}{2}\right)$  \_\_\_\_\_

12.  $\left(-2, -1\frac{1}{2}\right)$  \_\_\_\_\_

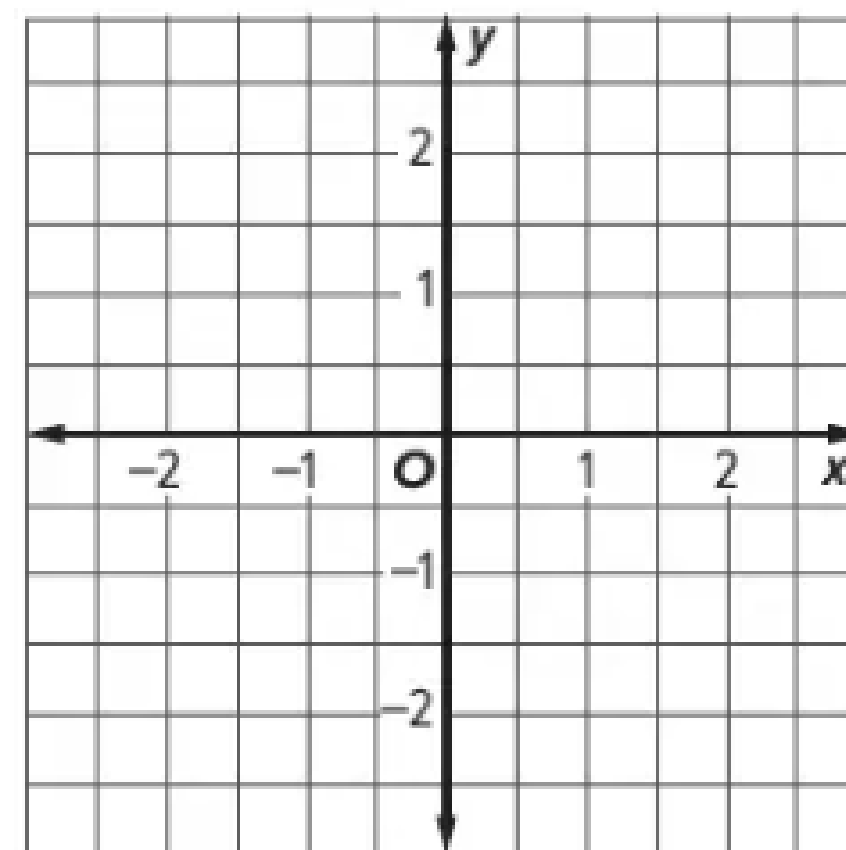


13. Graph  $A\left(\frac{1}{2}, 1\right)$ . (Example 5)



### Test Practice

14. **Grid** Graph  $X\left(-1\frac{1}{2}, 2\right)$ .



Evaluate each expression when  $x = \frac{3}{4}$  and  $y = 2.5$ . (Example 1)

1.  $8x$

2.  $y^2$

3.  $\frac{10}{y}$

Evaluate each expression when  $a = \frac{2}{3}$ ,  $b = \frac{4}{5}$ , and  $c = 6$ . Write in simplest form. (Example 2)

4.  $a + b$

5.  $c - b$

6.  $b - a$

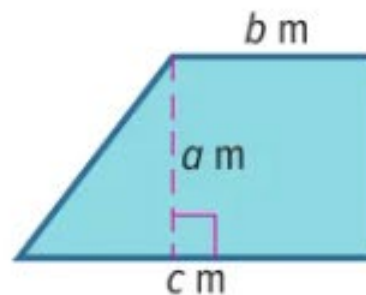
Evaluate each expression when  $a = 4$ ,  $b = 3$ , and  $c = \frac{1}{3}$ . (Example 3)

7.  $(3a + 18c) \div b^2$

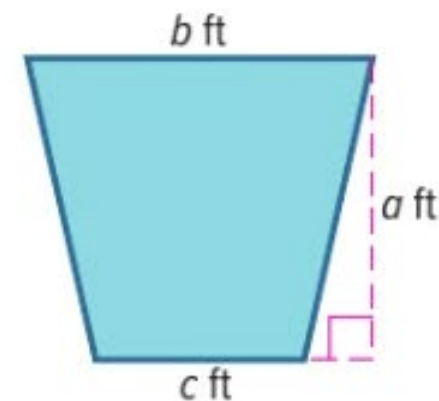
8.  $(a^2 + 12c) \div (7b - 1)$

9.  $(2b + 3a)(c^2)$

10. The expression  $\frac{1}{2}a(b + c)$  can be used to find the area of the trapezoid. What is the area of the trapezoid when  $a = 5.5$ ,  $b = 5$ , and  $c = 7.2$ ? (Example 4)



11. The expression  $\frac{1}{2}a(b + c)$  can be used to find the area of the trapezoid. What is the area of the trapezoid when  $a = 4.4$ ,  $b = 8$ , and  $c = 3$ ? (Example 4)



1. On Saturday and Sunday, Jarrod went running and burned a total of 647.5 Calories. He burned 320 of those Calories on Saturday. Write an addition equation that could be used to find the number of Calories Jarrod burned on Sunday. [\(Example 1\)](#)
2. Maggie and her sister bought a gift for their mother that cost \$54.75. Maggie contributed \$26 to the cost of the gift. Write an addition equation that could be used to find how much money Maggie's sister contributed to the gift. [\(Example 1\)](#)
3. A piece of material measures 38.25 inches. Courtney cuts the piece of material into two pieces. One piece measures 19.5 inches. Write an addition equation that could be used to find the length of the other piece of material. [\(Example 1\)](#)
4. On a two-day car trip, the Roberts family drove a total of 854.25 miles. On Day 1, the family drove 497.75 of those miles. Write an addition equation that could be used to find how many miles the Roberts family drove on Day 2 of their trip. [\(Example 1\)](#)

Solve each equation. Check your solution. (Examples 2 and 3)

5.  $9 = 3 + a$

6.  $5 + x = 10$

7.  $3\frac{1}{4} + z = 6\frac{3}{4}$

8.  $9\frac{1}{2} = b + 2\frac{1}{4}$

9.  $18.35 = c + 5.1$

### Test Practice

10. **Equation Editor** Solve  $x + 5.15 = 23.85$ .

← → ↶ ↷ ✕

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

14.  **Find the Error** A student is solving the equation  $x + 9 = 14$ . Find the student's mistake and correct it.

$$\begin{array}{r} x + 9 = 14 \\ + 9 = + 9 \\ \hline x = 23 \end{array}$$

1. On Monday, Homeroom 104 turned in 64 canned goods. This is 17 less than the number of canned goods turned in by Homeroom 106. Write a subtraction equation that could be used to find the number of canned goods turned in by Homeroom 106 on Monday. (Example 1)
2. Izan's youngest relative is 5 years old. This is 79 years less than the age of his oldest relative. Write a subtraction equation that could be used to find the age of his oldest relative. (Example 1)
3. To make a cake, Rose needed  $1\frac{1}{2}$  cups of sugar. This is  $1\frac{1}{4}$  cups less than the amount of flour she needed for the cake. Write a subtraction equation that could be used to find the amount of flour she needed for the cake. (Example 1)
4. On Sunday, Jax biked 10.25 miles. This is 3.5 fewer miles than the number of miles he biked on Saturday. Write a subtraction equation that could be used to find the number of miles Jax biked on Saturday. (Example 1)

Solve each equation. Check your solution. (Examples 2 and 3)

5.  $24 = x - 5$

6.  $z - 7 = 19$

7.  $z - 9\frac{1}{3} + = 1\frac{5}{9}$

8.  $5\frac{1}{2} = b - 12\frac{1}{4}$

9.  $67.9 = c - 4.45$

### Test Practice

10. **Equation Editor** Solve  $x - 7.49 = 87.3$ .

| ← → ↶ ↷ ✕ |   |   |
|-----------|---|---|
| 1         | 2 | 3 |
| 4         | 5 | 6 |
| 7         | 8 | 9 |
| 0         | . | - |

14.  **Find the Error** A student is solving the equation  $x - 3.2 = 5.5$ . Find the student's mistake and correct it.

$$\begin{array}{r} x - 3.2 = 5.5 \\ - 3.2 \quad -3.2 \\ \hline x \quad = 2.3 \end{array}$$