

# Pre-Module Assessment

\_\_\_\_\_  
 Name

\_\_\_\_\_  
 Date

1. Which equations represent the comparison statement *63 is how many times as much as 9*?  
 Choose **all** that apply.

A.  $63 = \underline{\hspace{2cm}} \div 9$

B.  $63 \times \underline{\hspace{2cm}} = 9$

C.  $\underline{\hspace{2cm}} \times 9 = 63$

D.  $\underline{\hspace{2cm}} \div 63 = 9$

E.  $63 \div 9 = \underline{\hspace{2cm}}$

2. Evaluate  $85 \times 10^4$ .

\_\_\_\_\_

3. Order the numbers from least to greatest. Write one number in each box.

5.201	5	5.2	5.12	5.1
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**Least**

**Greatest**

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4. Match each number with its expanded form. Write the letter for the expanded form from the given answer choices in each box.

<b>Number</b>	60.804	6.084	608.04
<b>Expanded Form</b>			

**Answer Choices**

<b>A</b>	$(6 \times 1) + (8 \times \frac{1}{100}) + (4 \times \frac{1}{1,000})$	<b>D</b>	$(6 \times 10) + (8 \times \frac{1}{10}) + (4 \times \frac{1}{1,000})$
<b>B</b>	$(6 \times 1) + (8 \times \frac{1}{10}) + (4 \times \frac{1}{100})$	<b>E</b>	$(6 \times 100) + (8 \times 1) + (4 \times \frac{1}{100})$
<b>C</b>	$(6 \times 10) + (8 \times \frac{1}{10}) + (4 \times \frac{1}{100})$	<b>F</b>	$(6 \times 100) + (8 \times 10) + (4 \times \frac{1}{10})$

5. Round the decimal 87.426 to each given place. Write one rounded number from the given answer choices in each box.

<b>Place</b>	Tens	Ones	Tenths	Hundredths
<b>Rounded Number</b>				

**Answer Choices**

80	87	87.4	87.42	87.43	87.5	88	90
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6. Which expression is equivalent to  $2xy + 3x$ ?

- A.  $5xy$
- B.  $2y(5x)$
- C.  $2(xy + x)$
- D.  $x(2y + 3)$

7. Indicate whether each expression is equivalent to  $-10$ , equivalent to  $10$ , or not equivalent to  $-10$  or  $10$ .

Expression	Equivalent to $-10$	Equivalent to $10$	Not Equivalent to $-10$ or $10$
$7 + 3$			
$-7 + (-3)$			
$7 + (-3)$			
$-2 \times (-5)$			
$-2 \times 5$			
$2 \times (-5)$			

8. Which expressions are equivalent to  $2^3$ ? Choose **all** that apply.

- A. 6
- B. 8
- C. 9
- D.  $3 \times 3$
- E.  $2 \times 2 \times 2$

9. Evaluate  $3.5 \div 7$ .

\_\_\_\_\_

10. Evaluate  $5.6 + 2.41 - 4.3$ .

\_\_\_\_\_

11. What is the value of  $3.4(6.8)$ ?

- A. 10.2
- B. 20.82
- C. 23.12
- D. 231.2



# Pre-Module Assessment

Name \_\_\_\_\_

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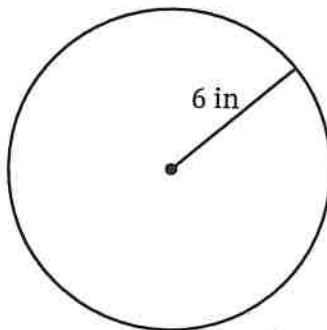
1. Noor makes volcano lava for the science fair. The table shows the ratio relationship between the number of teaspoons of glitter and the number of teaspoons of baking soda in the recipe for the lava.

Complete the table.

Number of Teaspoons of Glitter	Number of Teaspoons of Baking Soda
2	6
4	12
	21
9	

2. Ava has fiction and nonfiction books. The ratio of fiction books to nonfiction books is 3:5. Which statements must be true? Choose **all** that apply.
- A. Of Ava's books,  $\frac{3}{5}$  are fiction.
  - B. Of Ava's books, 3 out of every 8 are fiction.
  - C. Ava has 3 fiction books and 5 nonfiction books.
  - D. Ava has  $\frac{3}{5}$  as many fiction books as nonfiction books.
  - E. Ava has 2 more nonfiction books than fiction books.

3. What is the area of the circle?



- A.  $6\pi$  sq in
- B.  $12\pi$  sq in
- C.  $36\pi$  sq in
- D.  $113\pi$  sq in

4. In 2 hours, Earth rotates a distance of about 2080 miles.

**Part A**

Complete the equation to represent the approximate distance  $d$  in miles that the Earth rotates in  $h$  hours.

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

**Part B**

About what distance does Earth rotate in  $\frac{1}{2}$  hour?

           miles

5. What is the decimal form of  $\frac{3}{11}$ ?
- A. 0.27
  - B.  $0.\overline{27}$
  - C. 3.6
  - D.  $3.\overline{6}$

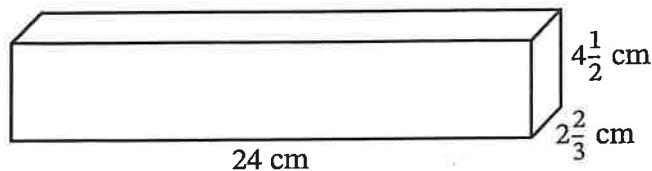
6. Consider the relationship between time  $t$  in hours and distance  $d$  in miles represented in the table.

Time, $t$ (hours)	Distance, $d$ (miles)
4	48
6	72
8	96

Which equation represents the relationship between  $t$  and  $d$ ?

- A.  $t = \frac{12}{d}$   
 B.  $t = 12d$   
 C.  $d = 12t$   
 D.  $d = \frac{12}{t}$

7. Consider the right rectangular prism.

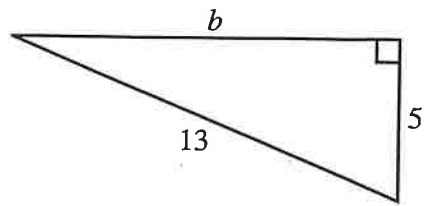


What is the volume of the right rectangular prism?

\_\_\_\_\_ cubic centimeters



8. Consider the triangle.



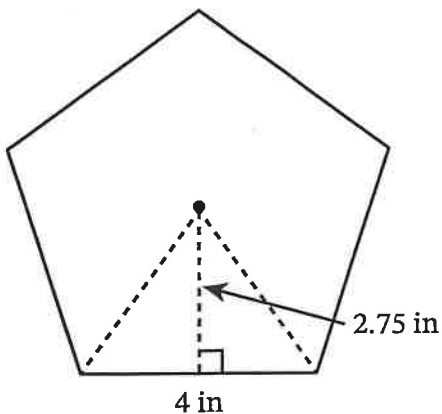
What is the value of  $b$ ?

\_\_\_\_\_

9. Solve the equation  $5(2x + 3) - 7x = 20$ .

\_\_\_\_\_

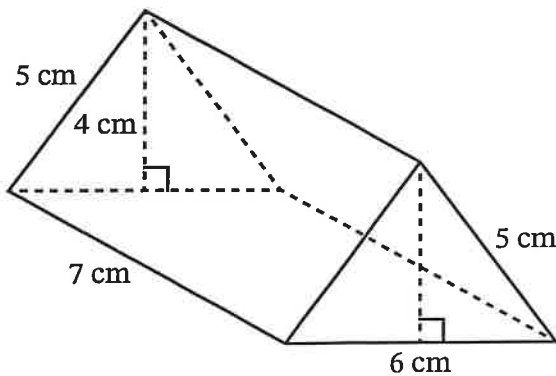
10. Consider the regular pentagon.



What is the area of the regular pentagon?

\_\_\_\_\_ square inches

11. Consider the right triangular prism shown.



What is the surface area of the right triangular prism?

\_\_\_\_\_ square centimeters

12. Determine which expression represents each description. Write one expression from the given answer choices in each box.

Description	Expression
The product of 5 and the sum of a number and 2	
The quotient of 5 and the sum of a number and 2	
Two times the difference of a number and 5	
The sum of a number and 5, doubled	

**Answer Choices**

$2(x + 5)$	$2(x - 5)$	$5(x + 2)$	$5 \div (x + 2)$
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13. Jonas makes school spirit bracelets. Out of every 12 bracelets, 7 are green. He makes 60 bracelets. How many bracelets are green?

There are \_\_\_\_\_ green bracelets.

Jada has 6 multicolored sports bands. She says that 24% of her sports bands are multicolored. What is the total number of sports bands Jada has?

\_\_\_\_\_ sports bands

14. Which value of  $p$  is the solution to the equation  $9 + 3(p + 3) = 24$ ?

A. -1

B. 2

C. 4

D. 12

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# Pre-Module Assessment

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Circle the factors of 54.

- |    |    |    |    |    |    |
|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 6  | 9  |
| 12 | 18 | 24 | 27 | 36 | 54 |

2. Classify each number as a perfect square or not a perfect square.

Number	Perfect Square	Not a Perfect Square
24		
49		
60		
78		
144		

3. Classify each number as rational or irrational. Write each number from the given answer choices in the correct column.

Rational	Irrational

**Answer Choices**

$\sqrt{81}$	$\frac{1}{3}$	0.412358...	$\sqrt{19}$	$0.\bar{7}$	0.675
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4. Complete the statement. Write one solution from the given answer choices in the blank.

If  $x^2 = 15$ , the value of  $x$  must be \_\_\_\_\_.

**Answer Choices**

-7.5	$-\sqrt{15}$	7.5	$\sqrt{15}$	$-\sqrt{15}$ or $\sqrt{15}$	-7.5 or 7.5
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5. Evaluate each expression.

$$\sqrt{25} = \underline{\hspace{2cm}}$$

$$\sqrt[3]{64} = \underline{\hspace{2cm}}$$

6. Write the values that make the statement true.

The expression  $12x + 18$  is equivalent to  $a(2x + b)$  when  $a = \underline{\hspace{2cm}}$  and  $b = \underline{\hspace{2cm}}$ .

7. Solve the equation  $6(2x - 3) = 0$ .

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

8. Solve the equation  $5(2x + 3) - 7x = 20$ .

\_\_\_\_\_

9. Write the unknown number in the pattern.

8, 13, 18, \_\_\_\_\_, 28, 33

10. Miss Tang and Mr. Scott purchase the same model of a laptop from different stores. Miss Tang pays  $d$  dollars for her laptop. Mr. Scott pays 15% more than Miss Tang pays for her laptop. Which expressions represent the amount in dollars Mr. Scott pays for his laptop? Choose **all** that apply.

A.  $0.15d$

B.  $1.15d$

C.  $d + 15$

D.  $d + 0.15d$

E.  $(d + 0.15)d$

F.  $(1 + 0.15)d$

G.  $1 + (1 + 0.15)d$

11. Write the number that makes each statement true.

If  $9^m = 9^{11} \cdot 9^{-6}$ , then  $m =$  \_\_\_\_\_.

If  $(6^7)^5 = 6^n$ , then  $n =$  \_\_\_\_\_.



# Pre-Module Assessment

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Write an expression that is equivalent to  $-\frac{5}{2}(3x + 6) + \frac{1}{2}(x + 4)$  by using the fewest terms possible.

\_\_\_\_\_

2. Solve the equation for  $x$ .

$$\frac{5}{6}x + 1 = \frac{2}{3}x - 7$$

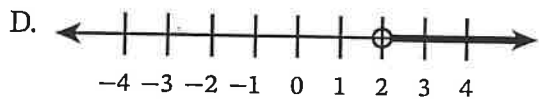
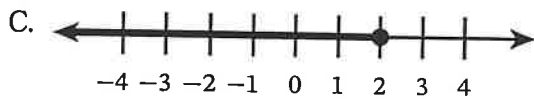
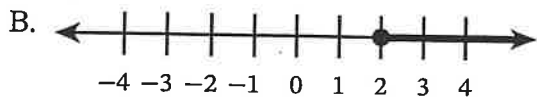
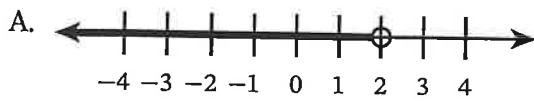
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3. Which inequality has the same solution set as  $-3x + 9 < 5$ ?

- A.  $x < \frac{4}{3}$
- B.  $x > \frac{4}{3}$
- C.  $x < -\frac{14}{3}$
- D.  $x > -\frac{14}{3}$

4. Which number line shows the graph of the solution set of  $x < 2$ ?

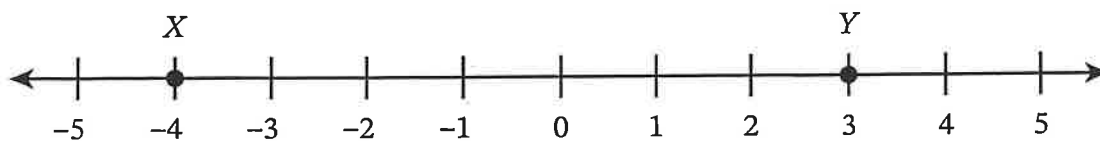


5. Kadir spends \$44.47. He buys a cellphone charger for \$17.50 and  $x$  cellphone cases for \$8.99 each.

Which equation can be used to find the number of cellphone cases Kadir buys?

- A.  $8.99x - 17.50 = 44.47$
- B.  $8.99x + 17.50 = 44.47$
- C.  $17.50x - 8.99 = 44.47$
- D.  $17.50x + 8.99 = 44.47$

6. Consider the number line shown.



Complete each statement. Write one point from the given answer choices in each box.

Point \_\_\_\_\_ represents the number with the greater value.

Point \_\_\_\_\_ represents the number with the greater absolute value.

**Answer Choices**

X	Y
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7. The data set shows the number of songs on different albums released in a week.

20 11 16 13 22 12 19 13 15 17 14

Fill in each blank to complete each statement.

The median number of songs for these albums is \_\_\_\_\_.

8. The data set shows the fuel economy in miles per gallon for different types of cars.

49 20 53 25 29 24 56 52 30 43 33 52 48 32

Fill in each blank to complete each statement. Round your answers to the nearest whole number if necessary.

The mean fuel economy for the cars in the data set is \_\_\_\_\_ miles per gallon.

The range of fuel economy for the cars in the data set is \_\_\_\_\_ miles per gallon.

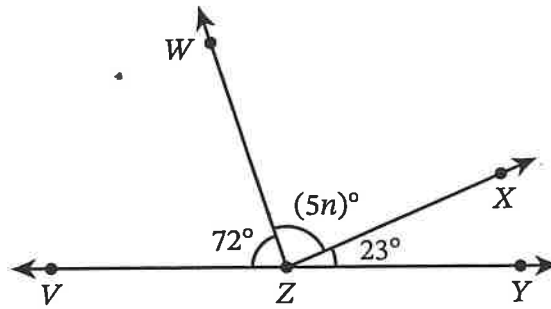


# Pre-Module Assessment

Name \_\_\_\_\_

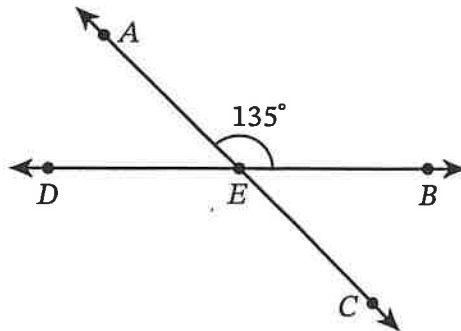
Date \_\_\_\_\_

1. Find the value of  $n$ .



\_\_\_\_\_

2. The measure of  $\angle CED$  is  $(10x - 7)^\circ$ .



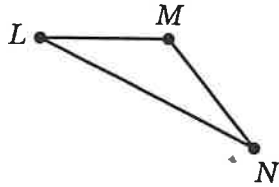
Find the value of  $x$ .

\_\_\_\_\_

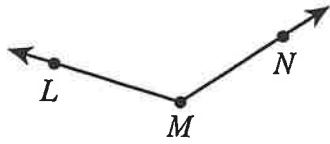
3. Match each diagram with its correct notation. Write one notation from the given answer choices in each box.

**Diagram**

**Notation**







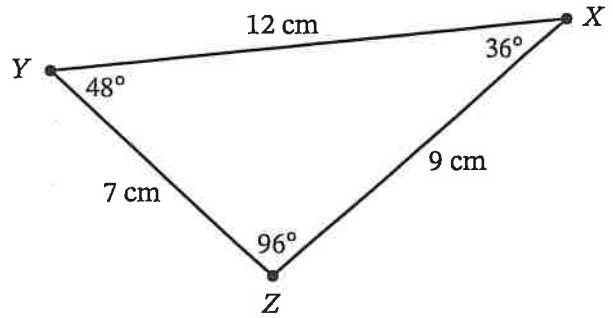
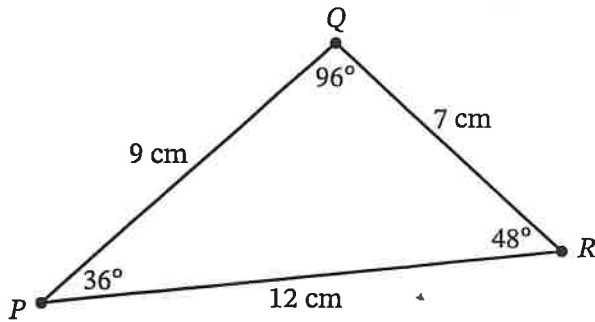





**Answer Choices**

$\overline{MN}$	$\overleftrightarrow{MN}$	$\overrightarrow{MN}$	$\overrightarrow{NM}$	$\angle MN$	$\angle LMN$	$\angle LNM$	$\triangle MN$	$\triangle LMN$
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4. The triangles are identical.

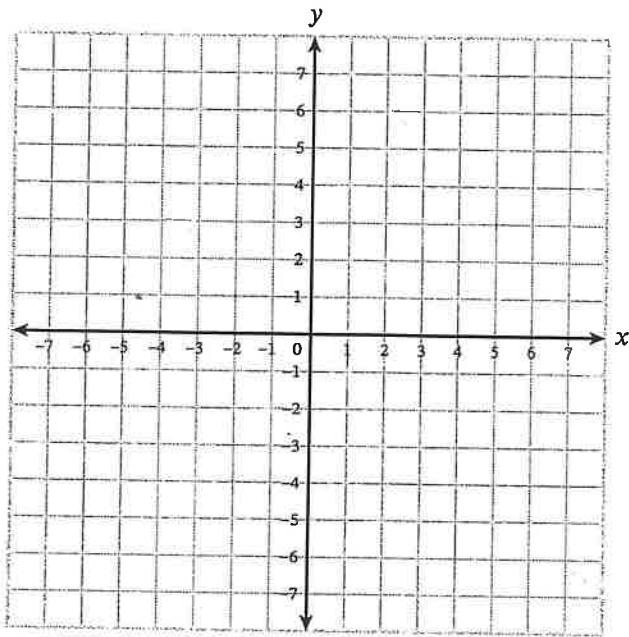


Identify the corresponding part between the two triangles that matches the given side or angle of  $\triangle PQR$ . Write one corresponding part from the given answer choices in each box.

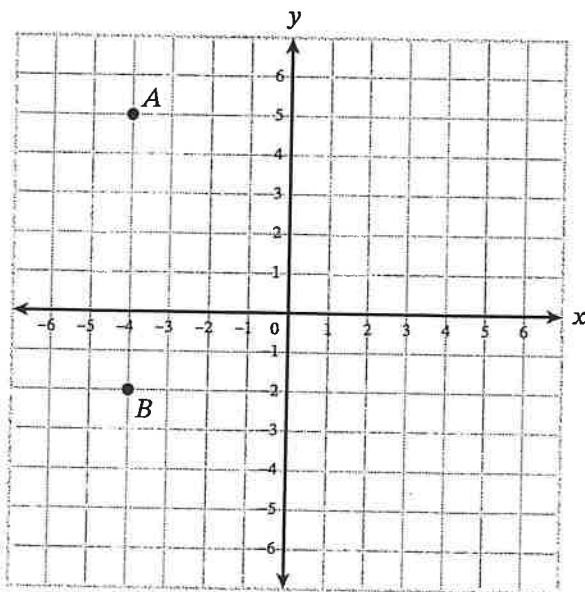
Given Triangle Part	Corresponding Triangle Part
$\overline{PQ}$	<input type="text"/>
$\overline{PR}$	<input type="text"/>
$\angle Q$	<input type="text"/>
$\angle R$	<input type="text"/>

Answer Choices					
$\overline{XY}$	$\overline{YZ}$	$\overline{XZ}$	$\angle X$	$\angle Y$	$\angle Z$

5. Plot the point  $(-3, 4)$ .



6. What is the distance between point  $A$  and point  $B$ ?



\_\_\_\_\_ units

7. Evaluate the expression  $5^2 + 9^2$ .

\_\_\_\_\_

8. Determine the value of the expression  $\frac{3}{4}p + q$  when  $p = 12$  and  $q = 2$ .

\_\_\_\_\_

9. Solve the equation  $x + 5 = 13$ .

\_\_\_\_\_

10. Solve the equation  $\frac{2}{3}x = 10$ .

\_\_\_\_\_

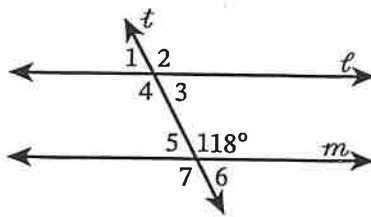
11. Solve the equation for  $x$ .

$$\frac{2}{5} = \frac{8}{x}$$

\_\_\_\_\_

In the diagram, parallel lines  $\ell$  and  $m$  are cut by transversal  $t$ .

12



Match each angle with its measure. Write one angle measure from the given answer choices in each box. Angle measures can be used more than once.

Angle	1	2	3	4	5	6	7
Measure							

**Answer Choices**

28°	62°	118°	242°
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# Pre-Module Assessment

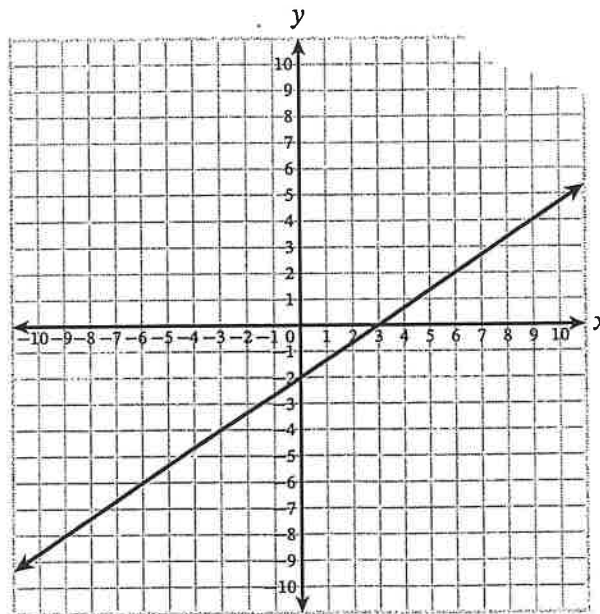
Name \_\_\_\_\_

Date \_\_\_\_\_

1. Write  $\frac{11}{25}$  as a decimal.

\_\_\_\_\_

2. Consider the graph shown.



Which equation represents the line?

- A.  $y = \frac{2}{3}x + 2$   
B.  $y = -\frac{2}{3}x - 2$   
C.  $y = \frac{2}{3}x - 2$   
D.  $y = \frac{3}{2}x - 2$

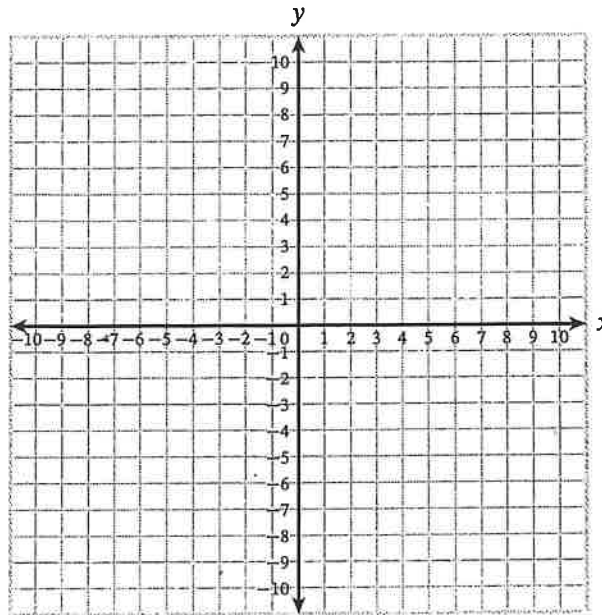
3. Consider the relationship represented by the table.

Input, $x$	Output, $y$
-10	4
-5	-1
0	-5
5	1
10	4

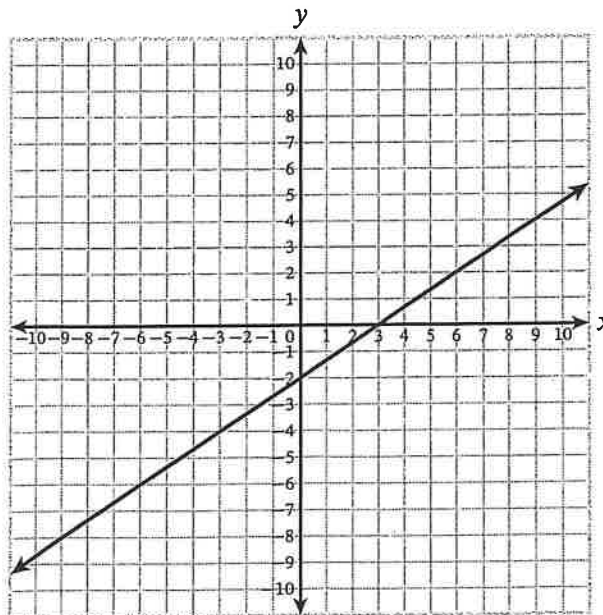
Which statement about the relationship is correct?

- A. The relationship is a function because each input has exactly one output.
- B. The relationship is a function because each output has exactly one input.
- C. The relationship is not a function because at least one input has more than one output.
- D. The relationship is not a function because at least one output has more than one input.

4. Graph the equation  $y = -\frac{4}{3}x + 8$ .



5. The graph of a linear equation is shown.



Fill in each blank to complete each statement.

The  $x$ -intercept of the line is \_\_\_\_\_.

The  $y$ -intercept of the line is \_\_\_\_\_.

6. Fill in each blank to complete each statement.

If  $x = -8$ , then  $5x - 4 =$  \_\_\_\_\_.

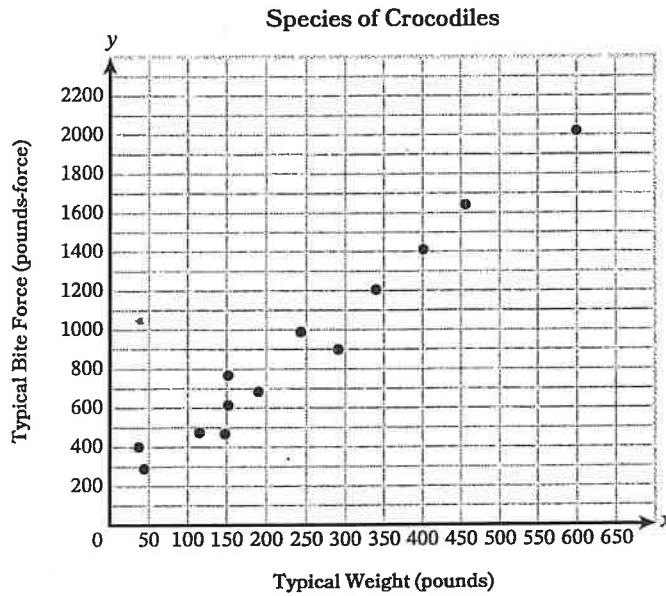
If  $n = 9$ , then  $60 - 5n =$  \_\_\_\_\_.

7. Water is drained from a swimming pool. The function represented by the equation  $y = 24,000 - 1800x$  describes the amount of water  $y$  in gallons that remains in the swimming pool after  $x$  hours.

Which statement describes the initial value of the function?

- A. The initial value of the function is 1800, which means 1800 gallons of water are drained from the swimming pool each hour.
- B. The initial value of the function is 1800, which means 1800 gallons of water are in the swimming pool before it is drained.
- C. The initial value of the function is 24,000, which means 24,000 gallons of water are drained from the swimming pool each hour.
- D. The initial value of the function is 24,000, which means 24,000 gallons of water are in the swimming pool before it is drained.

8. The scatter plot shows the typical weights in pounds and bite forces in pounds-force of 13 different species of crocodiles.



Which type of association best describes the data in the scatter plot?

- A. Strong, negative, linear association
- B. Strong, positive, linear association
- C. Weak, negative, linear association
- D. Weak, positive, linear association

9. A line passes through the points  $(-2, -1)$  and  $(1, 5)$ . Write the slope of the line.

10. Which equations represent the same line as  $y - 1 = -3(x - 2)$ ? Choose **all** that apply.

- A.  $y = -3x + 5$
- B.  $y = -3x + 7$
- C.  $y = -3x - 1$
- D.  $y = -3 + 7x$
- E.  $y = 7 - 3x$
- F.  $y = 5 - 3x$

11

Match each graph with the equation it represents. Write one equation from the given answer choices in each box.

<b>Graph</b>			
<b>Equation</b>	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>

**Answer Choices**

$y = -2x + 4$	$y = -3x + 2$	$y = 2x - 4$	$y = 3x + 2$	$y = \frac{3}{2}x - 2$	$y = \frac{2}{3}x - 2$
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