

Interpreting Graphs & Mixed Review

Agenda

Warm-Up

Notes - 5

Activity - Kahoot

HW: #1-6



Reminders

Algebra 1

STAAR 5/6!

Warm-Ups
due THURSSigned PR due
FRIDAY

Warmup TUESDAY

Have out your HW & Defeat the EOC book

1. Which expression is equivalent to $\frac{12x^6y^{-4}z^2}{3x^2y^{-6}z^3}$?

$$12 \div 3 = 4$$

~~A $\frac{9x^8z^5}{y^{-10}}$~~

~~B $\frac{4x^8z^5}{y^{-10}}$~~

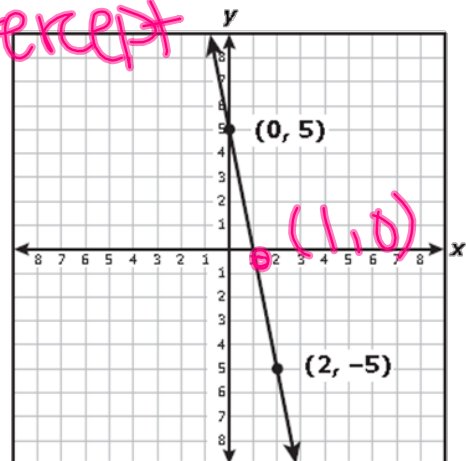
~~C $\frac{9x^4y^2}{z}$~~

(equal)

D $\frac{4x^4y^2}{z}$

2. What is the zero of the linear function graphed below?

Record your answer and fill in the bubbles on your answer document.



1

Practice

1. Which ordered pair is the solution to the system of equations below?

$$\begin{aligned} 3y &= 7 - x \\ x + 3y &= 7 \\ x + 2y &= 10 \end{aligned}$$

Handwritten: solve for y!

$$\frac{2y = 10 - x}{2} \Rightarrow y = \frac{10 - x}{2}$$

Handwritten: $y = \frac{7 - x}{3}$

A $(\frac{7}{2}, \frac{13}{4})$ B $(\frac{7}{2}, -3)$
 C $(-2, 3)$ D $(16, -3)$

2. Members of a senior class held a car wash to raise funds for their senior prom. They charged \$3 to wash a car and \$5 to wash a pick-up truck or a sport utility vehicle. If they earned a total of \$275 by washing a total of 75 vehicles, how many cars did they wash?

Handwritten: x → cars, y → trucks

$$\begin{aligned} 3x + 5y &= 275 \\ x + y &= 75 \end{aligned}$$

Handwritten: $3x + 5y = 275$, $x + y = 75$, $2x = 275 - 5y$, $x = \frac{275 - 5y}{2}$

A 25 B 34 C 45 D 50

3. Manuel and Felicia are comparing how much money they have. Manuel states that he has \$250 and saves \$150 per week. Felicia states that she has \$1,650 and spends \$200 per week. Which system of equations can be used to determine x , the number of weeks, and y the amount of money at the end of the week?

A $y = 250x + 150$ B $y = 250 + 150x$
 $y = 1650x - 200$ $y = 1650 - 200x$
 C $y = 250 - 150x$ D $y = 250 - 150x$
 $y = 1650 + 200x$ $y = 1650 - 200x$

- Given the two equations $2x + 3y = 12$ and $2x - y = 4$, what is the value of $x + y$?

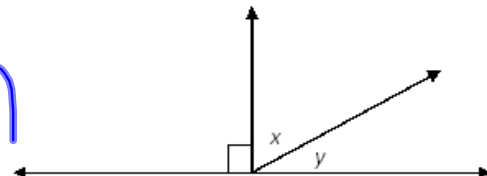
A -5 B -1 C 1 D 5

5. To solve the linear system below, which substitution of unknowns is proper?

$$\begin{aligned} 3x - 7y &= 12 \\ 5x - y &= -16 \end{aligned}$$

- A Substitute $5x - 16$ for y in the first equation.
 B Substitute $5x + 16$ for y in the first equation.
 C Substitute $5x + 12$ for y in the first equation.
 D Substitute $7y - 4$ for x in the second equation.

6. The measure of angle x is 15° less than twice the measure of angle y .



Which system of equations will determine the measure of each angle?

A $x + y = 90$ B $x + y = 90$
 $x = y - 15$ $x = 2y - 15$
 C $x + y = 90$ D $2x = 90$
 $x = 15 - 2y$ $x = 2y - 15$

7. Which point is a solution of the system of linear inequalities?

Handwritten: Plug in points BOTH TRUE

$$\begin{aligned} y &< -2x \\ y &> 3x + 5 \end{aligned}$$

A $(2, -1)$ B $(-4, 1)$
 C $(-1, 4)$ D $(1, -2)$

8. At what point do the lines represented by the equations $2x + y + 1 = 0$ and $4x + y - 3 = 0$ intersect?

A $(2, 5)$
 B $(2, -5)$
 C $(-1, 1)$
 D $(1, -1)$

9. Julie is planning to put a fence around a rectangular garden. The length of the garden is 3 feet more than 1.5 times its width. If Julie uses a total of 36 feet of fencing around the edge of the garden, what is the length of the garden?

A 6 ft
 B 13.2 ft
 C 12 ft
 D 10.5 ft

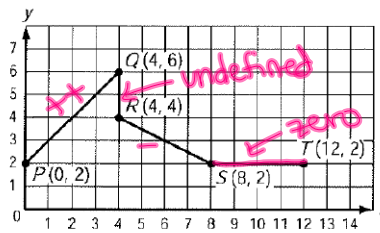
Interpreting Graphs

Always READ carefully!

1. Four line segments are shown on the coordinate grid below. Which of the line segments has a slope of 0?



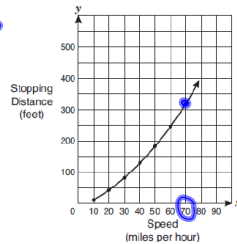
U \overline{PQ}
 V \overline{ST}
 W \overline{RS}
 X \overline{QR}



HOY
VUX

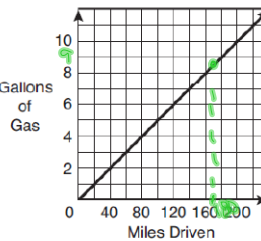
2. A graph of the relationship between the speed of a car in miles per hour and the car's approximate stopping distance in feet is shown below. What is the approximate stopping distance for a car traveling 70 miles per hour?

X 350 ft
 K 250 ft
 L 325 ft
 M 300 ft

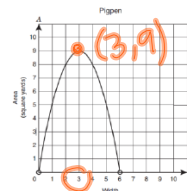


3. The graph shows the number of gallons of gas used by Maria's car as a function of the number of miles driven. About how many gallons of gas will Maria need for a 170-mile trip?

W 7 gal
 X 11 gal
 Y 8.5 gal
 Z 9.5 gal



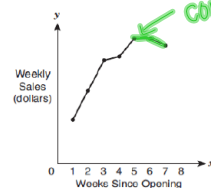
4. Hank wants to build a rectangular pigpen using 12 linear yards of fencing. The possible area in square yards, A , for this pigpen is described by the function $A = w(6 - w)$, where w represents the width in yards of the rectangular pen. The graph of this function is shown below.



- A The pigpen with the maximum area has a width of 6 yards.
 B The pigpen with the maximum area has a width of 3 yards.
 C The pigpen with the maximum area has a width of 9 yards.
 D The pigpen with the maximum area has a width of 12 yards.

Which statement best represents the information in this graph?

5. Jim recently opened a store. The graph below shows the store's weekly sales since it opened. What can be inferred from this graph?



- X The store's sales have been increasing since it opened.
 Q The store's sales increased for the first 5 weeks after it opened, remained constant the next week, and then decreased the last week shown.
 R The store's sales increased for the first 2 weeks after it opened, but then they began to decrease.
 S The store's sales increased for the first 5 weeks after it opened, but then they decreased the next 2 weeks.

KAHOOT IT OUT!

**Raise your hand
and wait patiently
for a device.**

This is a grade!!

Grades!!

~~Signed PR = free 100 HW grade~~

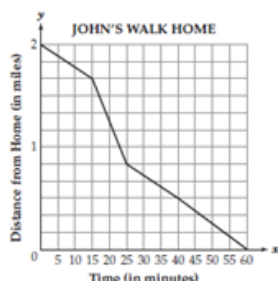
Extra Credit is NOT on your PR.

Test corrections (for unit 9 & 10) - If you received test corrections, then you are eligible. Please watch the videos before asking questions...

If you are NOT eligible, you may pick up the form, BUT you must attend a Wednesday or Saturday school to regain eligibility. Make sure the teacher signs the paper!!!

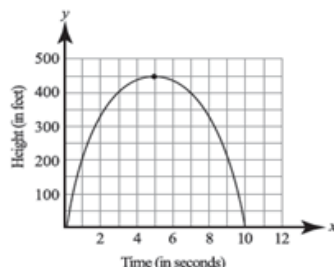
Practice

1. John is 2 miles away from his house. The graph below shows the time it takes John to walk home.



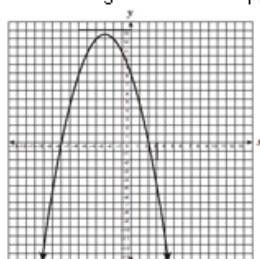
According to the graph, during what time interval is John walking the fastest?

2. The graph below represents the relationship between the time, in seconds, an arrow is shot upward and its height, in feet.



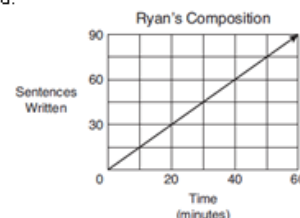
From the time it was shot, how long does it take for the arrow to return to the ground, and what is its maximum height?

- A 5 seconds, 450 feet
 B 10 seconds, 450 feet
 C 10 seconds, 500 feet
 D 450 seconds, 10 feet
3. The graph of $f(x) = -\frac{1}{2}x^2 - 3x + 8$ is shown below. Which of the following statements appears to be true?



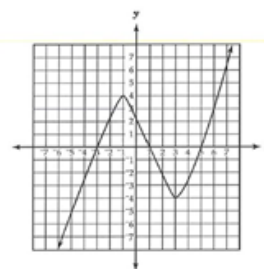
- A The vertex is at $(-3, 12)$.
 B The axis of symmetry is $x = -3$.
 C The zeros of the related function are $-8, 2$, and 8 .
 D The y -intercept is $(8, 0)$.

4. Ryan is writing a composition for homework. He decides to keep track of the number of sentences he writes compared to the time in minutes he works. The graph below shows the data he collected.



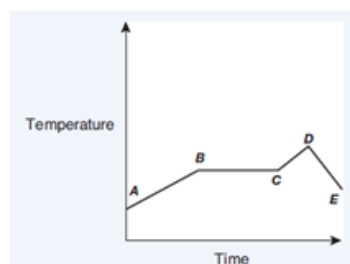
At what rate does Ryan write his composition?

- A 0.5 sentence per minute
 B 1 sentence per minute
 C 1.5 sentences per minute
 D 2 sentences per minute
5. Look at the function that is graphed below.



What are the zero(s) of the function?

6. The graph below shows the temperature in a town over the course of one day.



During what time period did the temperature increase at the greatest rate?

