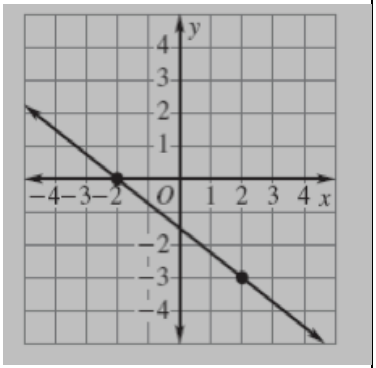
Name: _____ Pd:

STAAR PREP: 2

A.3C Key features of Linear Functions

Objective: I will be able to … graph linear functions and identify key features such as slope, x-, and y-intercepts

1. Identify the following:



a. slope:

b. y-intercept

c. x-intercept

d. zero:

2. Identify the following:

a. slope:

b. y-intercept

c. x-intercept

d. zero:

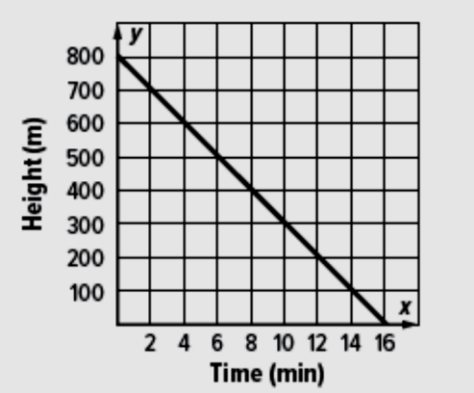
x	y
−6	−1
0	3
3	5

STAAR level linear questions:

3. The graph shows a gondola as it goes down a hill.

a. Slope and its meaning:

b. Y-intercept and its meaning:

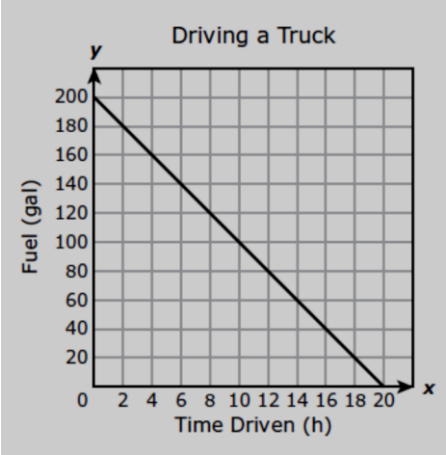


c. X-intercept and its meaning:

4. The graph shows the fuel of a truck as it is driven.

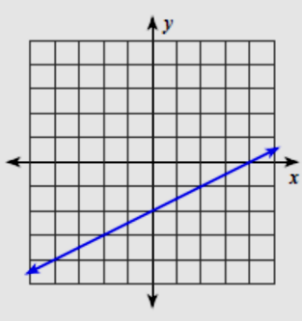
a. Slope and its meaning:

b. Y-intercept and its meaning:



c. X-intercept and its meaning:

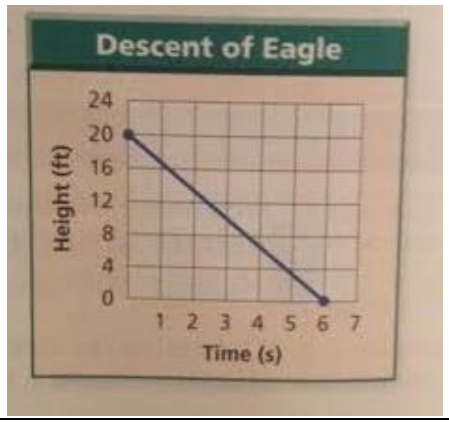
5. What is the zero of the function?



6. What is the zero of the function $3x - 4y = -36$?

Do It Yourself – CHOOSE ___! **My Goal: ____ /**

1. The graph shows the descent of an eagle.



a. What is the y-intercept and it's meaning?

b. What is the slope and it's meaning?

c. What is the x-intercept and its meaning?

2. What is the zero of the function $y = 5 - \frac{1}{2}x$? Sketch a graph to prove your answer.

3. The teachers started the year with 600,000 sheets of paper. Everyday, 2,000 sheets are used.

a. Write an equation to fit this scenrio.

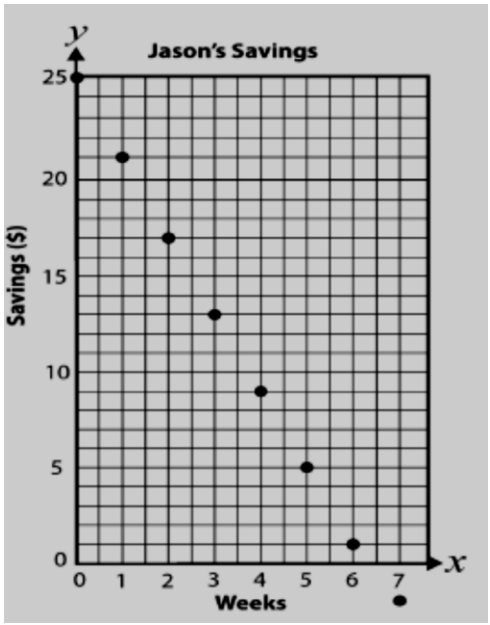
b. when will they run out of paper?

c. Is the answer to "b" the slope, y-intercept, or x-intercept?

4. The cost of renting a car for 1 day at Cars Plus is \$15 plus 20 cents per mile driven. This relationship can be represented by $y = .20x + 15$. In a graph of the cost of a car rental, what does the *initial* cost of renting a car, \$15, represent?

A. The x-intercept
B. The y-intercept
C. The slope
D. The point of intersection

5. Jason has \$25 and spends \$4 per week. What is the meaning of the x-intercept?



6. What are the x and y-intercepts of the linear function 2x –3y= 12?

F (−6, 0) and (0, 4)
G (−6, 0) and (0, −4)
H (6, 0) and (0, 4)
J (6, 0) and (0, −4)

7. What is the best fit line for the given situation?

Study Hours	Grade
3	84
2	77
5	92

8. Challenge! Which expression is equivalent to $2m\left(\frac{3}{2}m + 1\right) + 3\left(\frac{5}{3}m - 2\right)$?

a. $3m^2 + 5m - 1$

b. $\frac{3}{4}m^2 + \frac{23}{9}m - 6$

c. $3m^2 + 7m - 6$

d. $\frac{3}{4}m^2 + \frac{5}{9}m - 1$