**Applications of Linear Functions**

What is the slope of the line in this graph?

What is the rate of change? What does it represent?

What does the x-intercept represent?

What does the y-intercept represent?

1. Driving a Truck

Fuel Remaining in Tank in Gallons

0 2 4 6 8 10 12 14 16 18 20 22

250

200

150

100

50

 Time in Hours

 

1. Which table shows the same rate of change as the equation $y = 5 -\frac{3}{8} x$ ?

|  |  |
| --- | --- |
| x | y |
| -2 | 6 |
| 0 | 5 |
| 4 | 3 |
| 6 | 2 |

|  |  |
| --- | --- |
| x | y |
|  -3  | 0 |
| -1 | 2 |
| 0 | 3 |
| 4 | 7 |

|  |  |
| --- | --- |
| x | y |
| -8 | 8 |
| 0 | 5 |
| 4 | 3.5 |
| 8 | 2 |

|  |  |
| --- | --- |
| x | y |
| -3 | -14 |
| -1 | -8 |
| 1 | -2 |
| 3 | 4 |

1. Your friend needs to lose weight to wrestle in a certain weight class. His goal is to lose 3 pounds per week. After 3 weeks, his weight is down to 125 pounds. What represents the slope of this loss?



1. Where is the zero of this function?

Between \_\_\_\_\_ and \_\_\_\_\_\_.
2. A company purchases a forklift to help with loading items for shipping. The graph shows the value of the forlift over a period of time.



How much time has passed? \_\_\_\_\_\_\_\_

$ 25000

$ 20000

15000

10000

5000

What was the purchase price? \_\_\_\_\_\_\_

Is the forklift increasing or decreasing in value?

What is the rate of change of this value? \_\_\_\_\_\_\_\_\_

Can you write the equation for this function?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

At what age will it have no value? \_\_\_\_\_\_\_

0 1 2 3 4 5 6 7 8 9 10 11

 Age in Years of Forklift

What was its value at 5 years old? \_\_\_\_\_\_\_\_\_\_\_

1. The function y = 6 + 1.25x can be used to find the cost of joining an online movie club and buying x movies from the website. Based on this information, which statement about the graph of this situation is true?

A The y-intercept of the graph represents the cost of each movie.

B The y-intercept of the graph represents the cost of joining the movie club.

C The slope of the graph represents the total number of movies bought by members of the club.

D The slope of the graph represents the number of movies each member buys when visiting the website



Which statements are true about the graph provided?

1. x-intercept: ( 0, 4)
2. Y-intercept: ( 0, -4)
3. Zero: ( 5, 0)
4. Slope: $\frac{4}{5}$