

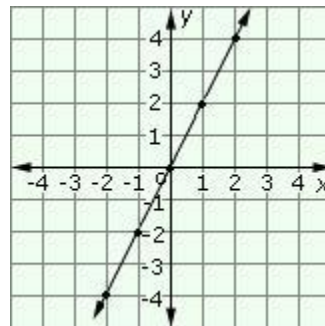


8. 1 – 8.3 Linear Functions, Rate of Change, Initial Value

1. Write a rule to describe the linear function for the graph.

2. Circle the rule or rules that represent a linear function.

$$y = -5x \quad y = x^4 \quad y = x - 3 \quad \frac{x}{5}$$



3. Makaylee is two years older than Carson. What function rule describes Makaylee's age for any given age of Carson? Let C represent Carson's age, and let M represent Makaylee's age.

a. $m = 2 + c$

b. $m = b \div 2$

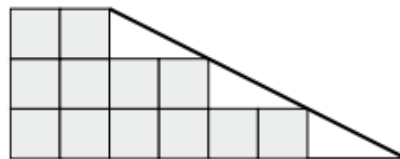
c. $m = 2c$

d. $m = 2 - c$

4. Find the rate of change of the linear function from the points (0, 10) to the point (24, 6).

5. Find the rate of change for the linear function $y = \frac{1}{7}x + 4$?

6. A board is placed over the stairs of a store to allow wheelchair access. What is the rate of change of the linear function that models the height of the ramp?



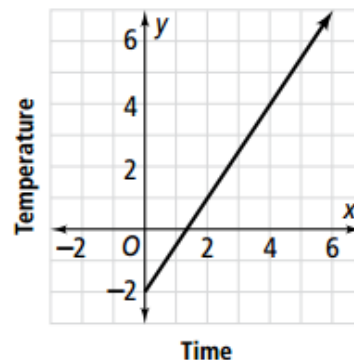
7. Find the rate of change for the data in the table as a unit rate.

Hours	3	5	7
Earnings	\$20.25	\$33.75	\$47.25

8. What is the initial value of the linear function $y = 5x - 6$?

9. The graph shows the outside temperature for several hours in one day.

a. What is the rate of change?



b. What is the initial value?

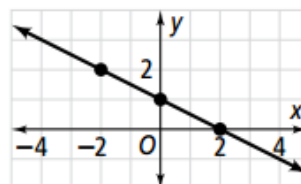
c. What is the function rule?

10. In the example above (#9) what does the initial value mean?

11. Find the rate of change and the initial value for the graph.

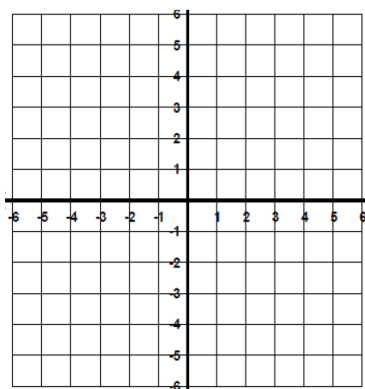
a. Rate of Change:

b. Initial Value:

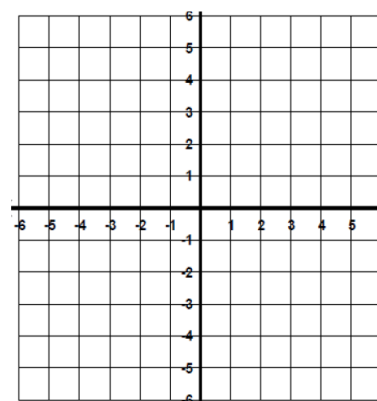


Graph the following equations.

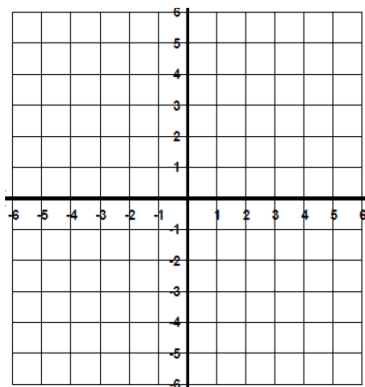
12. $y = \frac{1}{5}x - 3$



13. $y = x$



14. $3x + 3x = 6$



15. $y - 7 = \frac{3}{5}(x - 5)$

