

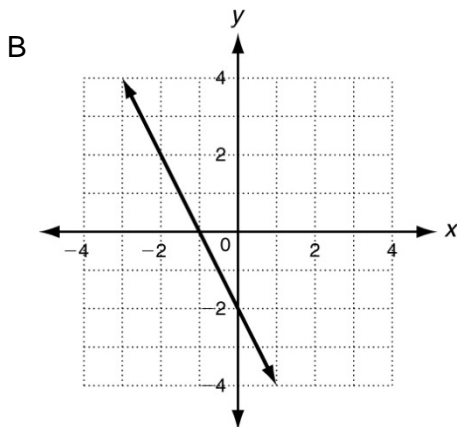
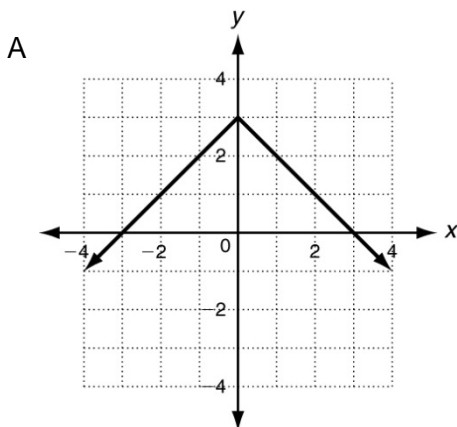


Linear Functions

REVIEW

Select the best answer.

1. Which graph represents a linear function?



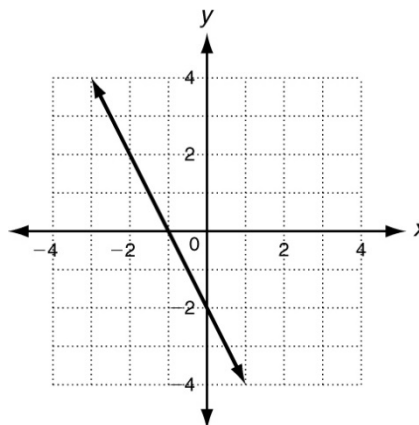
2. A car travels at 30 mi/h. The function $f(x) = 30x$ gives the distance the car travels in x hours. What is the **domain** of this function? *think if this should be discrete or continuous

3. Find the x -intercept of the equation $7x + 3y = 21$.

4. The table shows the price of a video game for different years since the game was released. **Find the rate of change during each time interval** and determine during which time interval did the price **decrease** at the greatest rate?

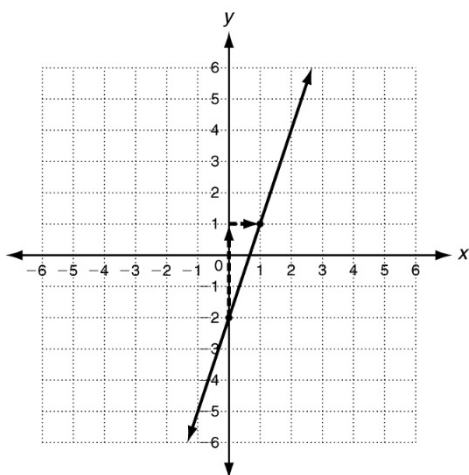
Year	2000	2002	2003	2005	2007
Price (\$)	50	57	52	55	43

5. The slope of this line is _____.



6. Find the slope of the line that contains the points $(-5, 7)$ and $(5, 2)$.

7. What is the slope and y-intercept of the graph?



8. Write an equation that in slope-intercept form that describes the line with a slope of $\frac{3}{4}$ that contains the point (4, -2)?

9. Which equation describes the line with a slope of -2 and y-intercept of 10?

10. Is this relationship a direct variation?

$$y = 4x + 3$$

A yes

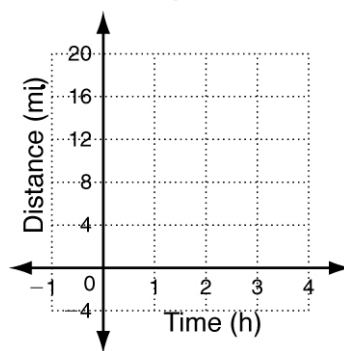
B no

11. Find the x- and y-intercepts of $5x - 2y = 20$. Write the answers as points.

x-intercept: _____

y-intercept: _____

12. A jogger runs 8 mi/h. The $f(x) = 8x$ gives the distance the jogger travels in x hours. **Graph this function.**

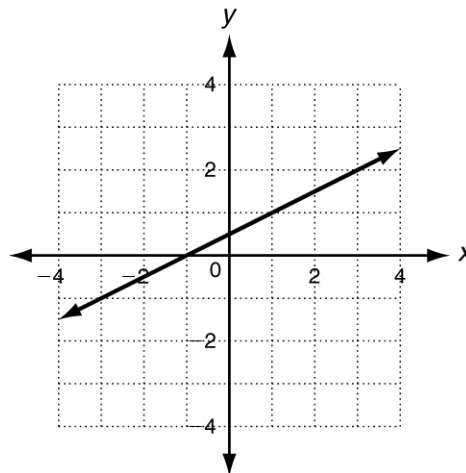


Give its domain and range.

Domain: _____

Range: _____

13. Tell whether the slope of this line is positive, negative, zero, or undefined.



14. Over the last 85 years, the average temperature has increased by -5 degrees worldwide (I made this up). What is the rate of change in worldwide temperatures per year?

A climber is on a hike. After 2 hours he is at an altitude of 400 feet. After 6 hours, he is at an altitude of 700 feet.

15. What is the hiker's rate of change in feet per second?

16. Write a linear equation in slope-intercept form to represent the hiker's situation.

17. What is the y-intercept and what does it represent?

18. Write an equation in slope-intercept form that describes the line with a slope of 5 and y-intercept of -8.

19. Graph the line with a slope of $-\frac{1}{2}$ and y-intercept of 5.

