

Name: _____ Date: _____ Period: _____

Unit 2 Linear Equations Pre-Quiz

1. Write out the slope formula between two points.

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

2. Write out the point-slope form.

$$y - y_1 = m(x - x_1)$$

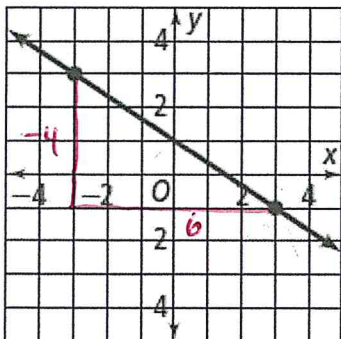
3. Write out the slope-intercept form.

$$y = mx + b$$

4. Write out the linear standard form.

$$Ax + By = C$$

5. What is the slope of the line?



$$m = \frac{-4}{6} = -\frac{2}{3}$$

6. Find the slope between the points (4, 2) and (-3, 9)

x_1, y_1 x_2, y_2

$$m = \frac{9 - 2}{-3 - 4} = \frac{7}{-7} = -1$$

7. What is the equation of a line that passes through the point (2, -5) and has a slope of $-\frac{1}{2}$ in Point-Slope form?

$$y - (-5) = -\frac{1}{2}(x - (2))$$
$$y + 5 = -\frac{1}{2}(x - 2)$$

8. Write the following equation in standard form. $Ax + By = C$

$$8y = -x - 15$$

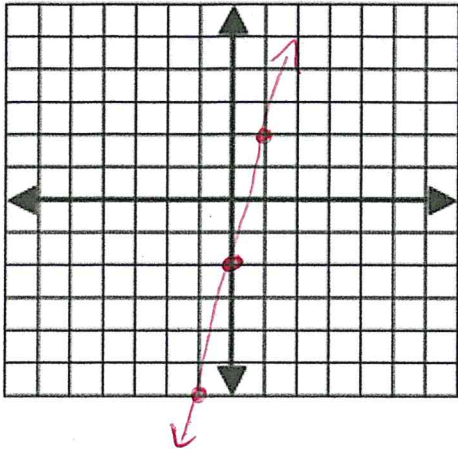
REWRITE

$+x$ $+x$

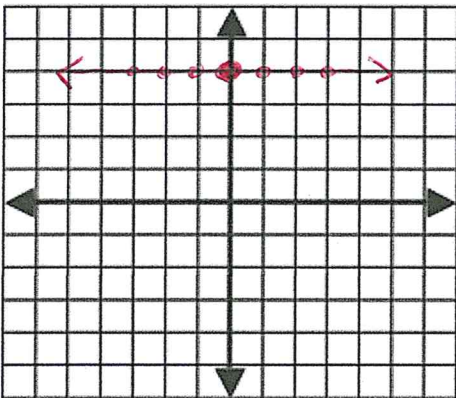
$$x + 8y = -15$$

Graph the following equations

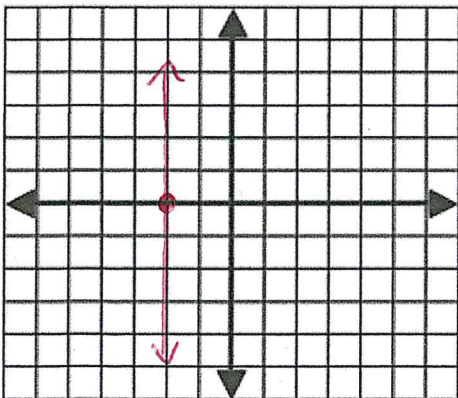
9. $y = 4x - 2$ $m = 4$ $b = -2$



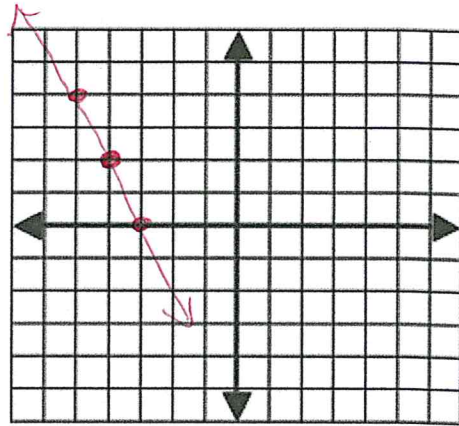
10. $y = 4$ $m = 0$ $b = 4$



11. $x = -2$ $m = \text{UNDEFINED}$
 $b = \text{NONE}$



12. $y - 2 = -2(x + 4)$ $(-4, 2)$ $m = -\frac{2}{1}$



13. $2x - 4y = 12$ REWRITE
 $-2x$ $-2x$

$$-4y = -2x + 12$$

SLOPE INTERCEPT

$$\frac{-4y}{-4} = \frac{-2x}{-4} + \frac{12}{-4}$$

$$y = +\frac{1}{2}x - 3$$

INTERCEPTS

$$2x - 4y = 12$$

$$2(0) - 4y = 12$$

$$-4y = 12$$

$$\frac{-4y}{-4} = \frac{12}{-4}$$

$$y = -3$$

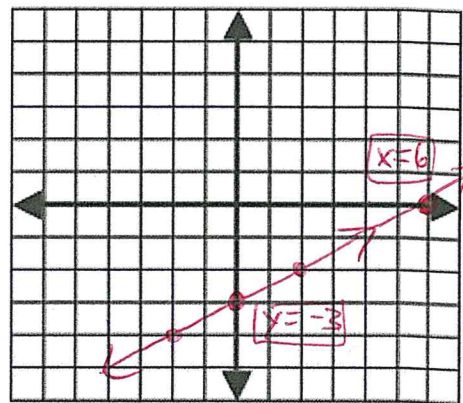
$$2x - 4y = 12$$

$$2x - 4(0) = 12$$

$$2x = 12$$

$$\frac{2x}{2} = \frac{12}{2}$$

$$x = 6$$



14. Which linear function rule models the table below?

x	y
0	6
5	9
10	12
15	15

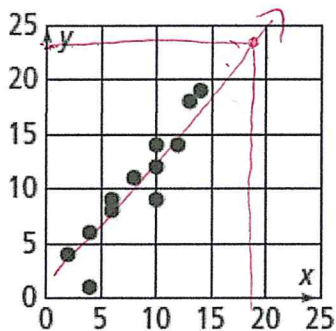
A $y = \frac{3}{5}x$

B $y = \frac{5}{3}x + 6$

C $y = \frac{3}{5}x + 6$

D $y = \frac{3}{5}x + 5$

15. Which is the most reasonable prediction based on the graph below?



F When $x = 24$, y will be about 17.

G When $x = 20$, y will be about 21.

H When $y = 24$, x will be about 17.

J When $y = 21$, x will be about 20.

16. What is the equation of the line that passes through the point $(6, -1)$ and has a slope of $-\frac{1}{3}$?

F $y = -\frac{1}{3}x + 3$

G $y = -\frac{1}{3}x + 1$

H $y = -\frac{1}{3}x - 1$

J $y = -\frac{1}{3}x - 3$

17. Suppose y varies directly with x . Write an equation for the direct variation if $y = 24$ when $x = 3$.

A $y = 72x$

B $y = \frac{8}{x}$

C $y = 8x$

D $y = \frac{1}{8}x$

$24 = 8(3)$

18. Which is NOT a true statement?

A The graph of $x = 5$ is a horizontal line.

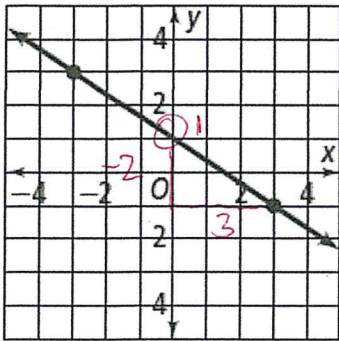
B The graph of $x = 5$ has an undefined slope.

C The graph of $y = 5$ has a slope of zero.

D The graph of $y = 5$ is a horizontal line.

VERTICAL

19. Which function rule is graphed below?



- A $y = -\frac{3}{2}x$
- B $y = -\frac{3}{2}x + 1$
- C $y = -\frac{1}{3}x + 1$
- D** $y = -\frac{2}{3}x + 1$

20. What is the slope of the line of $2 + y = 7$?

$-2 + -2$ $y = 5$

- A undefined
- B 5
- C 2
- D 0**

21. What is the type of rate of change?

$f(x) = -\frac{3}{5}x + \frac{7}{8}$

- A undefined
- B positive
- C** negative
- D 0

RATE OF CHANGE AND SLOPE ARE THE SAME THING.

22. Which graph shows an x-intercept of -3?

