

Chapter 6 Practice Test

Multiple Choice

Identify the choice that best completes the statement or answers the question.

Match the equation with its graph.

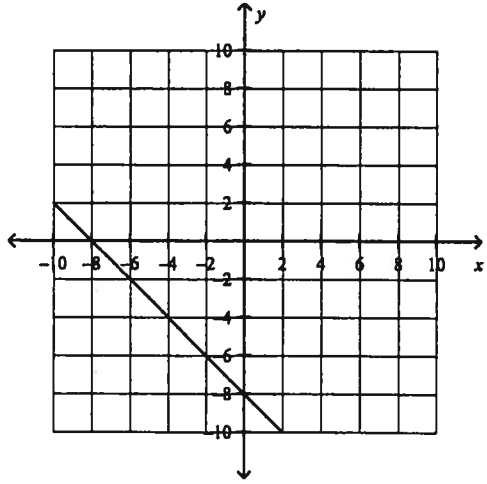
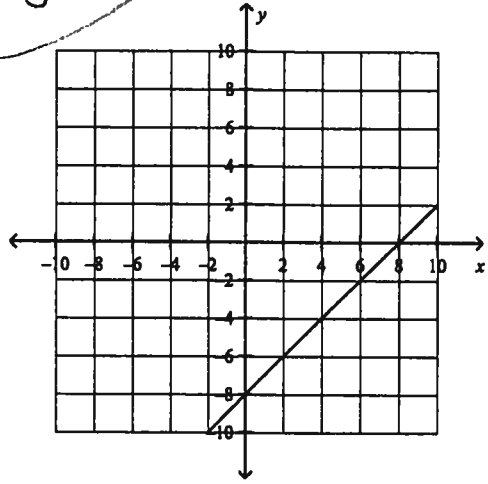
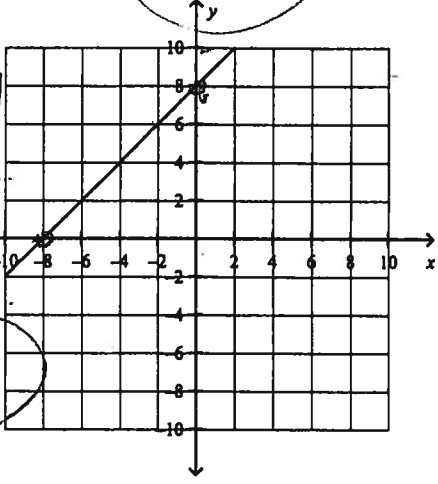
a. 1. $8x - 8y = -64$

a.

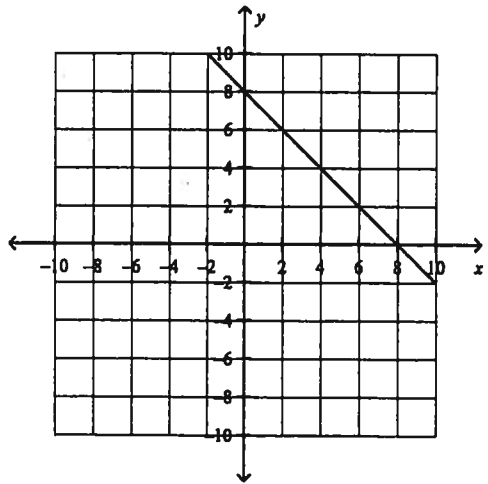
$8x = -64$
 $x = -8$

$-8y = -64$
 $y = 8$

$8x - 8y = -64$
 $-8y = -8x - 64$
 $y = x + 8$

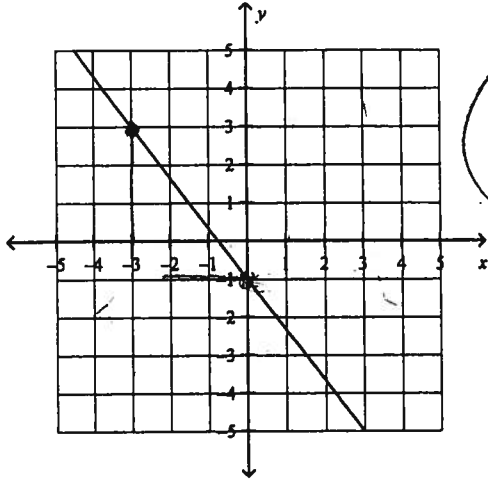


d.



Find the slope of the line.

2.



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

Find the slope and y-intercept of the line.

3. $8x + 4y = -76$

$$\frac{8x}{4} + \frac{4y}{4} = \frac{-76}{4}$$

$$y = -2x - 19$$

$$y = -2x - 19$$

$$m = -2$$
$$b = -19$$

Find the x- and y-intercept of the line.

4. $-2x + 6y = -24$

$$-2x = -24$$

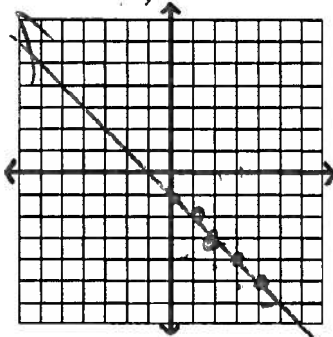
$$x = 12$$

$$6y = -24$$

$$y = -4$$

Graph the equation.

5. $y + 3 = -(x - 2)$



$m = -\frac{1}{1}$ (x_1, y_1)
 $(2, -3)$

$y + 3 = -1x + 2$
 -3 -3

$y = -1x - 1$
 $y = mx + b$

Write an equation in point-slope form for the line through the given point with the given slope.

6. $(2, -3); m = \frac{4}{5}$

$y + 3 = \frac{4}{5}(x - 2)$

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

8. Find the slope of the line that passes through the pair of points. $(-2, 8), (8, -1)$

Slope: $\frac{-9}{10}$ $m = \frac{-1 - 8}{8 - (-2)} = -\frac{9}{10}$

7. The rate of change (or slope) is constant in the table. Find the rate of change. Explain what it means for the situation.

Time (hours)	Distance (miles)
4	204
6	306
8	408
10	510

+2
+2
+2

+102
+102
+102

Slope = $\frac{102}{2} = 51 \text{ mph}$

9. Write an equation of a line with the given slope and y-intercept. $m = -3, b = 6$

$y = -3x + 6$

10. Find the slope and y-intercept of the line.

$y = \frac{4}{5}x - 2$

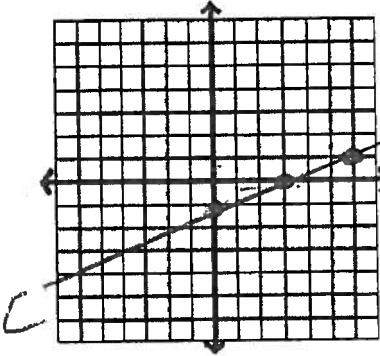
slope: $\frac{4}{5}$
 y-intercept: -2

11. Use the slope and y-intercept to graph the equation.

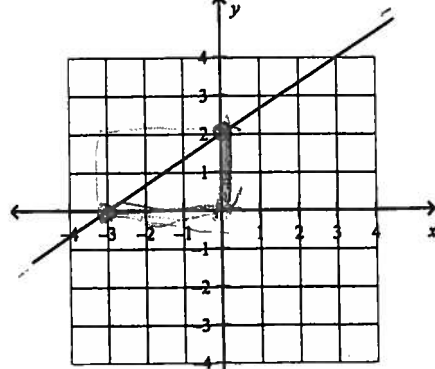
$$y = \frac{1}{3}x - 1$$

$$m = \frac{+1}{+3}$$

$$b = -1$$



14. Find the slope of the line.



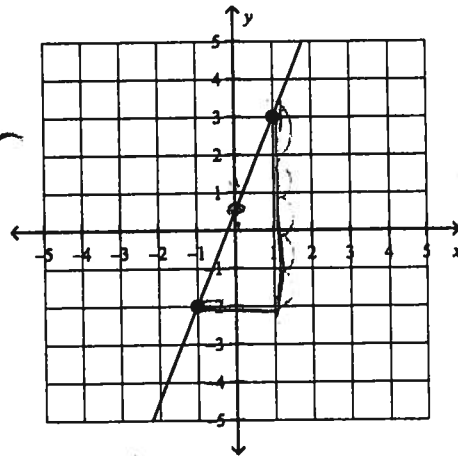
$$m = \frac{+2}{3} \text{ rise over run}$$

12. A student finds the slope of the line between $(11, 19)$ and $(16, 14)$. She writes $\frac{19-14}{16-11}$.

What mistake did she make?

Switched x+y order in numerator

15. Write the slope-intercept form of the equation for the line.

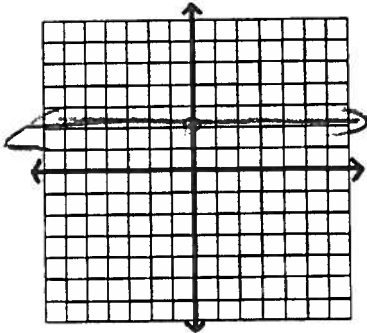


$$m = \frac{+3}{2}$$

$$b = 0.5 = \frac{1}{2}$$

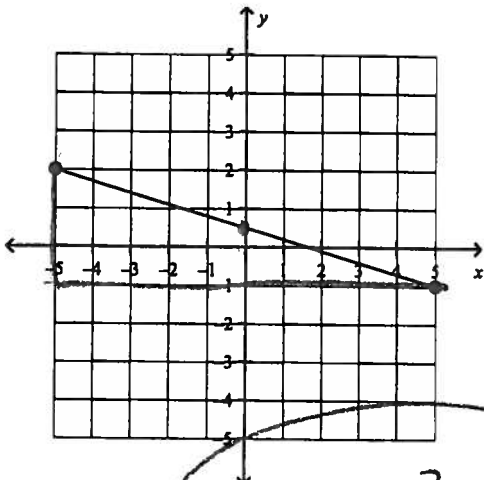
$$y = \frac{3}{2}x + \frac{1}{2}$$

13. Graph the equation. $y = 2$



Write the slope-intercept form of the equation for the line.

16.



$m = -\frac{3}{10}$
 $b = 0.5$
 $\frac{1}{2}$

$y = -\frac{3}{10}x + \frac{1}{2}$

19. Write an equation in point-slope form for the line through the given point with the given slope. $(-2, -9); m = \frac{2}{5}$

$y + 9 = \frac{2}{5}(x + 2)$

20. A line passes through $(5, 3)$ and $(4, 5)$.
 a) Write an equation for the line in point-slope form.

Equation: $y - 3 = -2(x - 5)$

$m = \frac{5-3}{4-5} = \frac{2}{-1} = -2$

OR $y - 5 = -2(x - 4)$

b) Change the equation from part a) into slope-intercept form.

Equation: $y = -2x + 13$

$y - 3 = -2(x - 5)$

$y - 3 = -2x + 10$
 $+3$ $+3$

$y = -2x + 13$

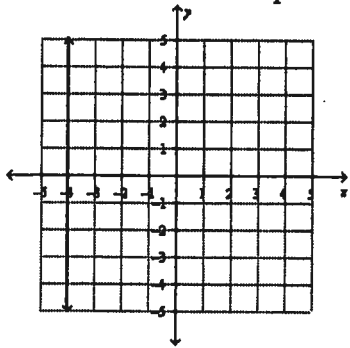
OR

$y - 5 = -2(x - 4)$

$y - 5 = -2x + 8$
 $+5$ $+5$

$y = -2x + 13$

17. State whether the slope is 0 or undefined.



undefined

18. Find the x- and y-intercept of the line.

$x + 5y = 30$
 x-int: 30 y-int: 6

$x = 30$ $5y = 30$
 $y = 6$