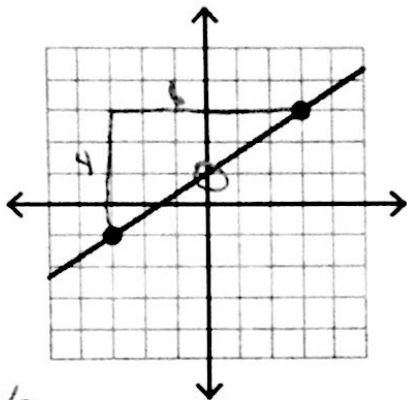


Find the slope and y - intercept of each line.

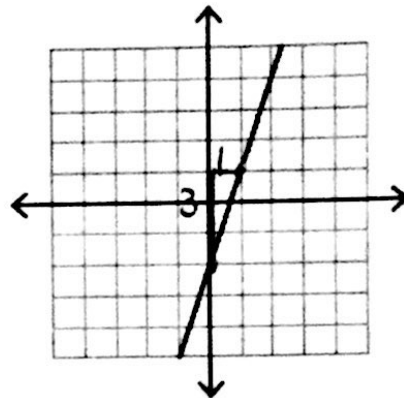
1.



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

Slope $\frac{1}{3}$
y-intercept $(0, 1)$; 1

2.



Slope 3
y-intercept $(0, -2)$; -2

Find the slope of the line for each pair of points.

3. $(1, 0)$ and $(3, 6)$
 x_1, y_1 x_2, y_2

$\frac{y_2 - y_1}{x_2 - x_1} = \frac{6 - 0}{3 - 1} = \frac{6}{2} = 3 = m$

4. $(-2, 1)$ and $(2, 3)$
 x_1, y_1 x_2, y_2

$\frac{y_2 - y_1}{x_2 - x_1} = \frac{3 - 1}{2 - (-2)} = \frac{2}{4} = \frac{1}{2} = m$

Find the slope and y-intercept for the following equations.

5. $y = 5x - 7$

Slope 5 y-intercept -7

6. $y = -2x + 4$

Slope -2 y-intercept 4

7. $y = x$

Slope 1 y-intercept 0

8. $y + 3x = 8$ (CAREFUL!) $y = -3x + 8$

Slope -3 y-intercept 8

Look back at the equations for #5-8 to answer the following.

9. Which equation has the steepest graph?

5) $y = 5x - 7$

10. Which equation has the flattest graph?

7) $y = x$

11. Which equation(s) have graphs that slant upwards from left to right?

5) $y = 5x - 7$ & 7) $y = x$

12. Write an equation of a graph that crosses the y-axis at a higher point than the equation $y = 2x + 1$.

$y = 2x + 2$

Write an equation in slope intercept form ($y = mx + b$) of a line with the following.

13. slope 1 y-intercept at (0, 5)

$$y = -1x + 5$$

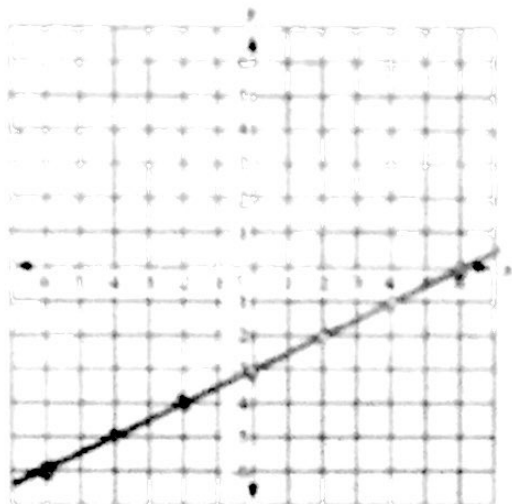
14. slope 2, y-intercept at (2, -8)

$$y = 2x - 8$$

Identify the slope and y-intercept and graph the following equations.

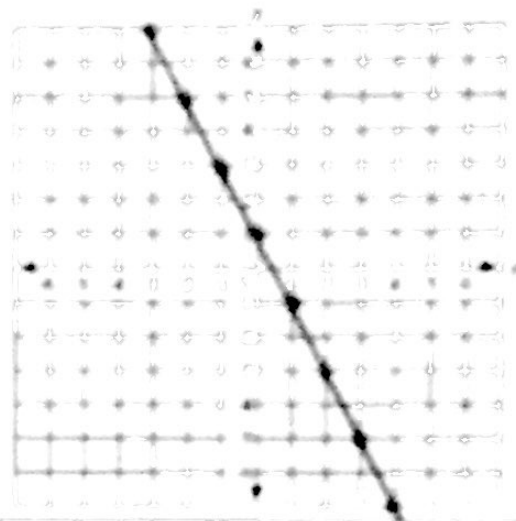
15. $y = \frac{1}{2}x - 3$

Slope = $\frac{1}{2}$ y-intercept = -3



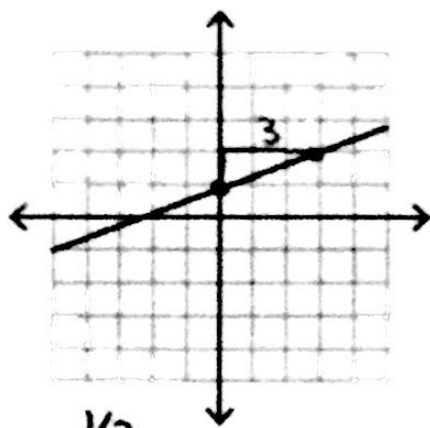
16. $y = -2x + 1$

Slope = -2 y-intercept = 1



Write an equation for the following lines.

17.

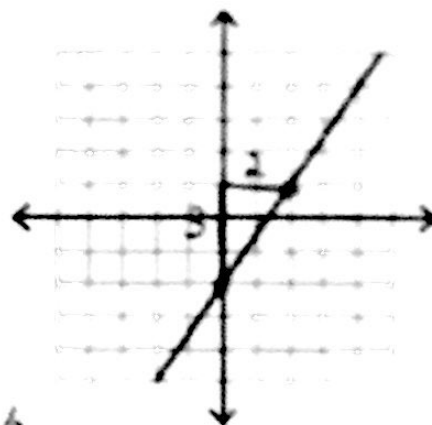


Slope = $\frac{1}{3}$

Y-Intercept = 1

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

18.



Slope = $\frac{3}{2}$

Y-Intercept = -2

Equation = $y = \frac{3}{2}x - 2$

Math 8 Unit 11 Equations of Lines Review

Name: _____

19. An electrician charges customers a basic rate of \$22 for making a service call plus \$35 for each hour worked. Write an equation to represent the total charge, C, if h represents the number of hours worked. What is the y-intercept? Explain its meaning.

Equation $C = 35h + 22$

y-intercept $(0, 22)$

meaning of y-intercept basic rate of \$22

$m = 35$

$b = 22$

20. On a recent backpacking trip up a mountain trail, Jim noticed that it seemed to get colder the further up the mountain he hiked from about 9 a.m. until about 3 p.m. He thought that it should get warmer in the afternoon hours, but the temperature dropped as indicated in the table below.

What is the slope of the data in the table?

What is its meaning in Jim's situation?

Elevation (ft)	Temperature (Fahrenheit)
x_1 1,000	70 y_1
x_2 2,000	69 y_2
2,500	68.5
4,000	67
5,000	66
5,500	65.5

Slope $-\frac{1}{1000}$

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{69 - 70}{2000 - 1000} = \frac{-1}{1000}$$

Meaning to Jim

For each 1000 ft Jim climbs, the temperature drops 1°.