Math 084 W2010 Worksheet 4.4 v02
y = mx + b Exercises
Dressler

Name_____

Find the slope of the line.

1) $y = 6x$

2) $y = -8x$

3) $y = -4x + 7$

4) $y = \frac{3}{4}x + 1$

5) $y = 5$

6) $y = 9 - x$

7) $-6x + y = 40$

8) $2x + 4y = -14$

Find the y–intercept.

9) $y = -5x$

10) $y = 8x + 2$

11) $y = 8$

12) $3x + y = 2$

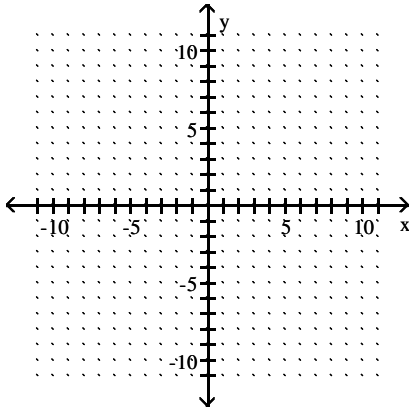
13) $9x + y = 0$

14) $-4y = -3x$

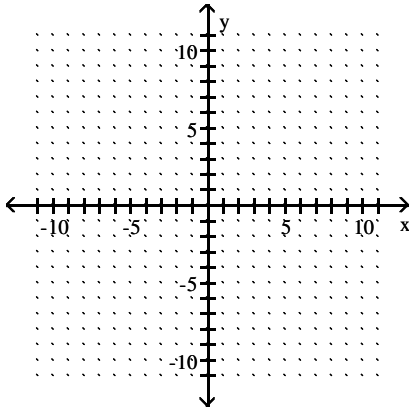
15) $3x - 4y = 4$

Graph the linear equation using the slope and y–intercept.

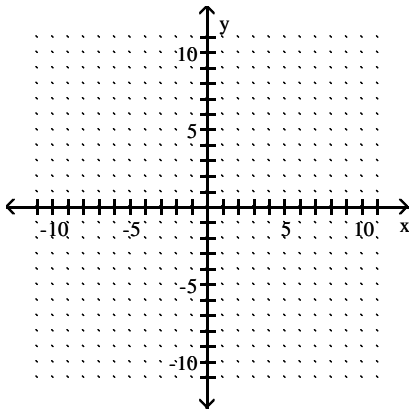
16) $y = 4x - 3$



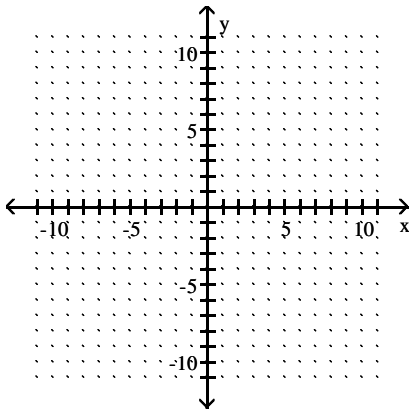
17) $y = \frac{1}{2}x + 3$



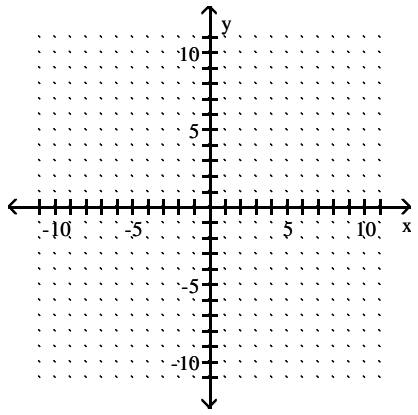
18) $y = -\frac{1}{5}x + 2$



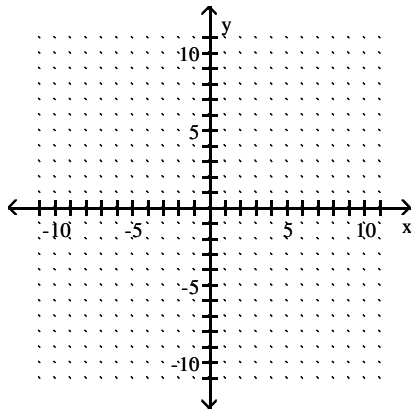
19) $y = \frac{5}{6}x - 5$



20) $y = \frac{4}{3}x$

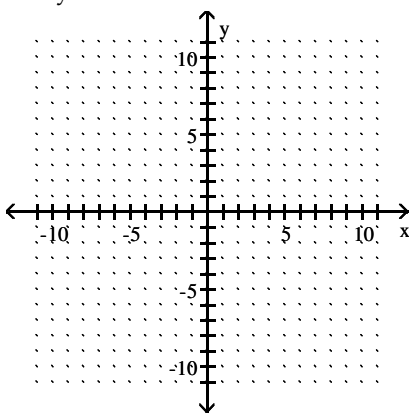


21) $y = 3x$

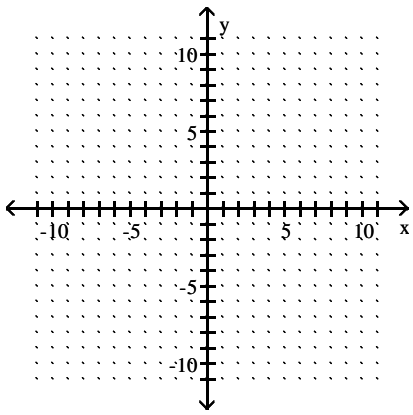


Put the equation in slope–intercept form by solving for y. Use the slope and y–intercept to graph the equation.

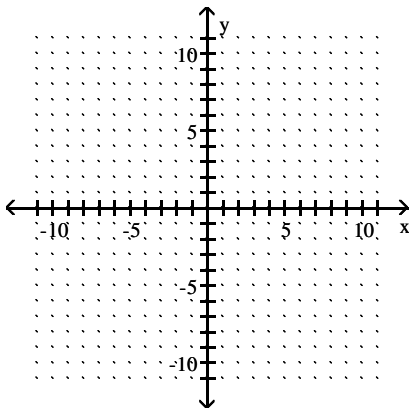
22) $3x + y = 0$



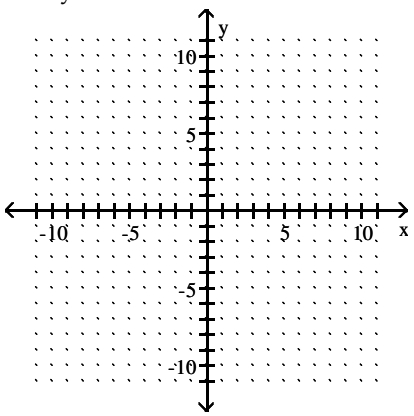
23) $2x + y = 3$



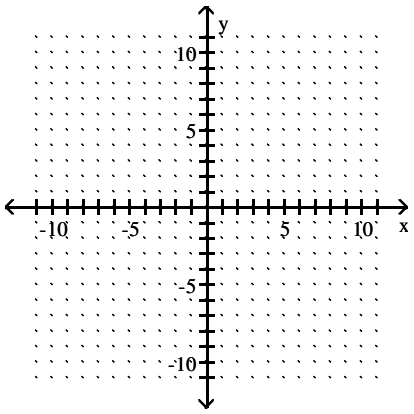
24) $7x + 5y = 35$



25) $4x + y = 5$



26) $5y = 3x$



Interpret the linear equation.

27) When a tow truck is called, the cost of the service is given by the linear function $y = 2x + 55$, where y is in dollars and x is the number of miles the car is towed. Find and interpret the slope and y–intercept of the linear equation.

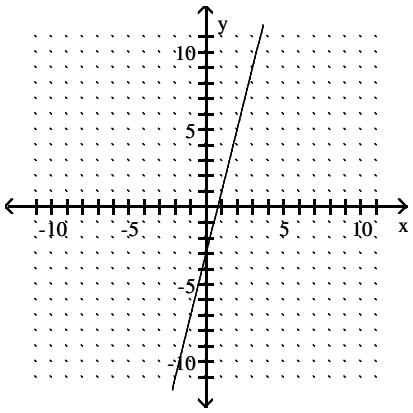
28) The monthly cost of a certain long distance service is given by the linear function $y = 0.07x + 4.95$ where y is in dollars and x is the amount of time in minutes called in a month. Find and interpret the slope and y–intercept of the linear equation.

29) The amount of water in a leaky bucket is given by the linear function $y = 128 - 7x$, where y is in ounces and x is in minutes. Find and interpret the slope and y–intercept of the linear equation.

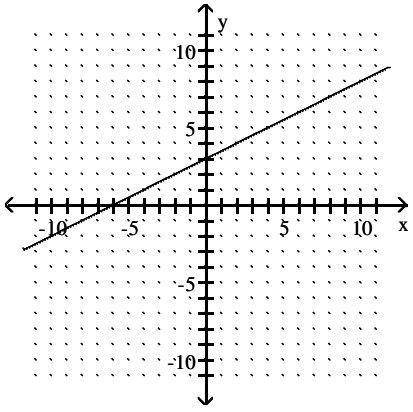
30) The altitude above sea level of an airplane just after taking off from an airport on a high plateau is given by the linear function $y = 900x + 3343$, where y is in feet and x is the time in minutes since take–off. Find and interpret the slope and y–intercept.

31) The speed of a ball dropped from a tower is given by the linear function $y = 32x$ where y is in feet per second and x is the number of seconds since the ball was dropped. Find and interpret the slope and y–intercept of the linear equation.

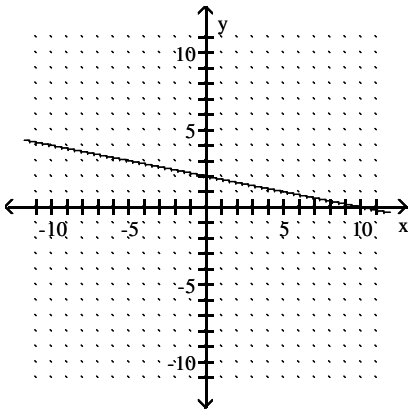
1) 6
2) –8
3) – 4
4) $\frac{3}{4}$
5) 0
6) –1
7) 6
8) $-\frac{1}{2}$
9) 0
10) 2
11) 8
12) 2
13) 0
14) 0
15) – 1
16)



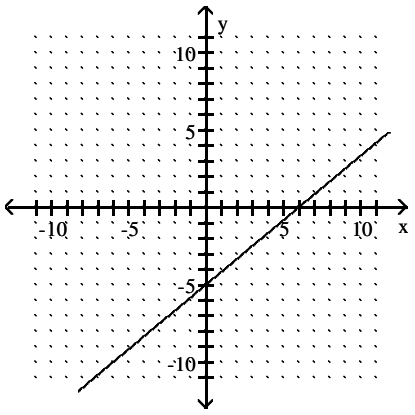
17)



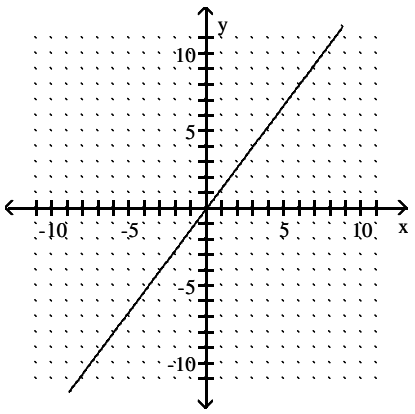
18)



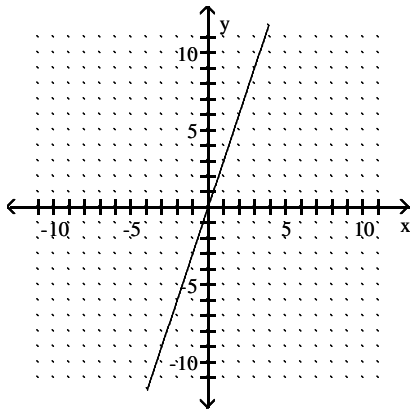
19)



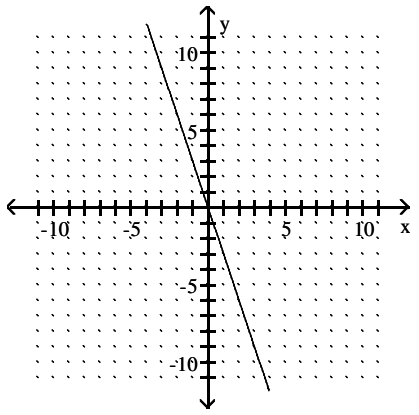
20)



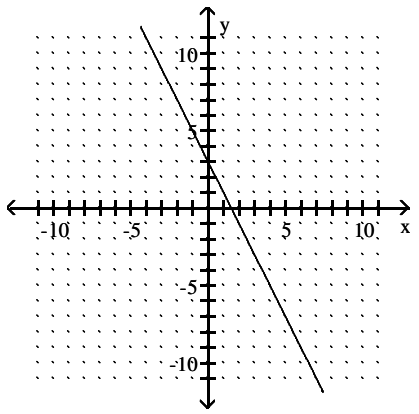
21)



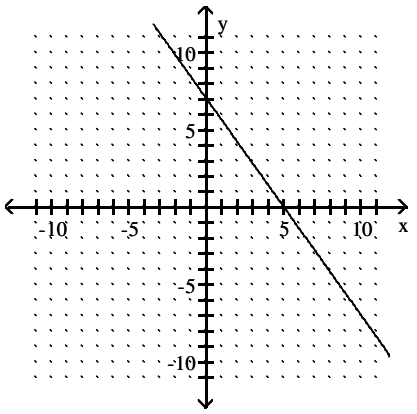
22)



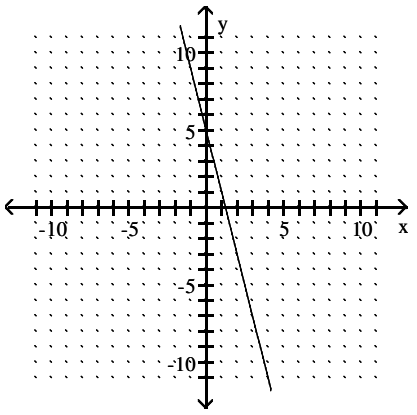
23)



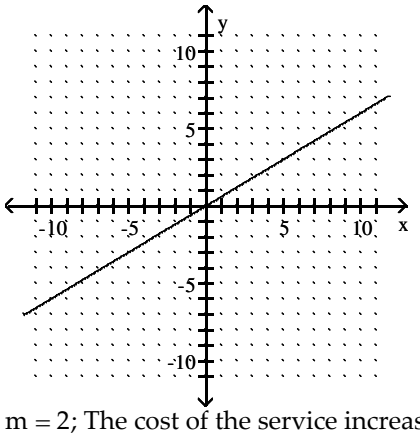
24)



25)



26)



27) m = 2; The cost of the service increases $2 every mile the car is towed. b = 55; The cost of the service is $55 if the car is not towed.

28) m = 0.07; The cost of the long distance service increases $0.07 for every 1 minute called. b = 4.95; The cost of the long distance service is $4.95 if no calls are made for the month.

29) m = –7; The amount of water in the bucket decreases 7 ounces every minute. b = 128; At x = 0, the amount of water in the bucket was 128 ounces.

30) m = 900; The altitude of the airplane increases 900 feet every minute. b = 3343; The altitude of the airport where the airplane took–off is 3343 feet above sea level.

31) m = 32; The speed of the ball increases 32 feet per second every second. b = 0; The speed of the ball was 0 the moment it was dropped.