Math 084 W2010 Worksheet 4.4 v01
y = mx + b Exercises
Dressler

Name_____

Find the y–intercept.

9) $y = 9x$

Find the slope of the line.

1) $y = 8x$

10) $y = -3x - 1$

2) $y = -5x$

11) $y = 9$

3) $y = -3x - 2$

12) $5x + y = -6$

4) $y = \dfrac{6}{5}x + 2$

13) $5x + y = 0$

5) $y = 3$

14) $6y = -7x$

6) $y = 4 - x$
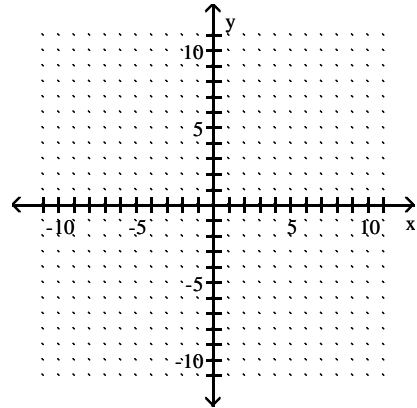
15) $2x + 7y = -9$

7) $-6x + y = -38$

8) $5x + 6y = -2$

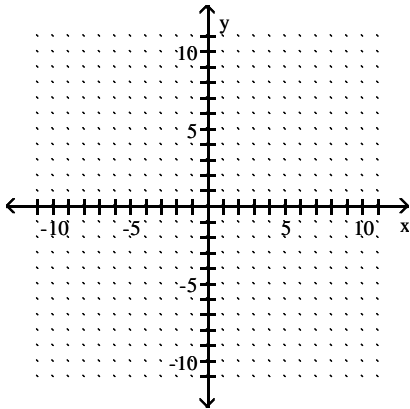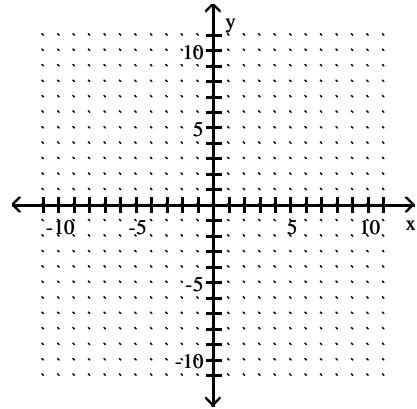**Graph the linear equation using the slope and y–intercept.**
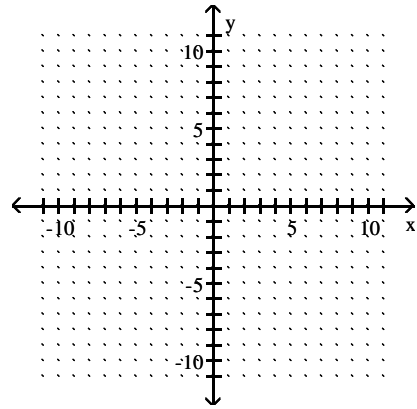
16) $y = 2x - 3$
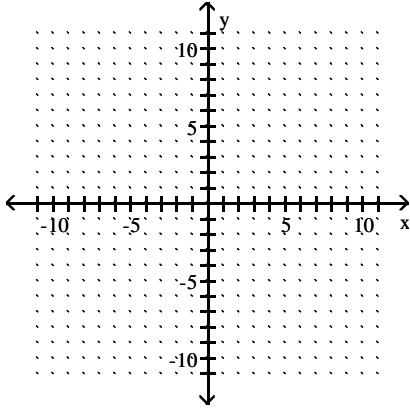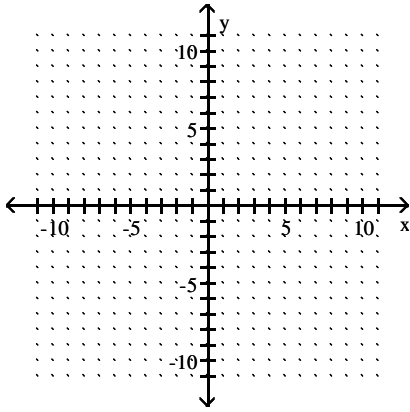
17) $y = \dfrac{1}{3}x + 3$

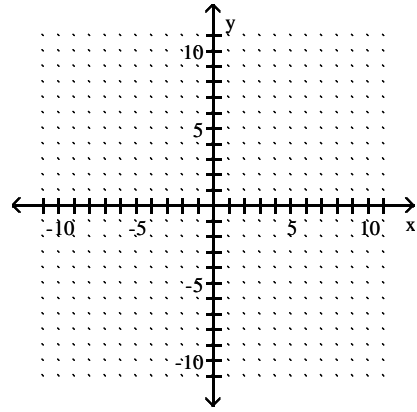18) $y = -\dfrac{1}{2}x + 4$

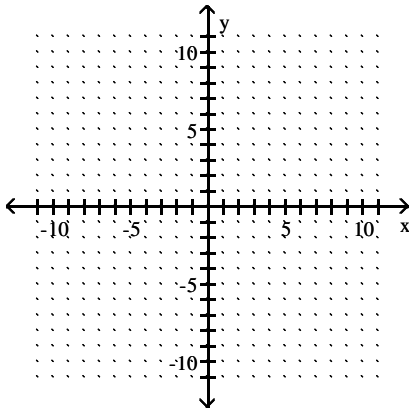19) $y = \dfrac{3}{4}x - 1$

20) $y = -2x$

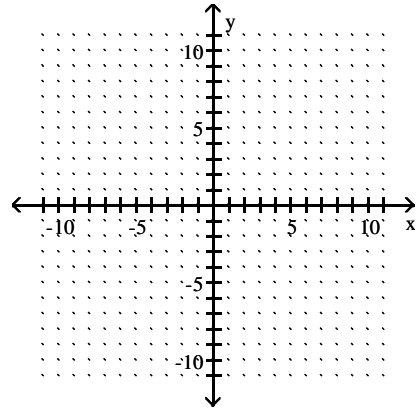21) $y = 4x$

24) $3x + 2y = 6$

Put the equation in slope–intercept form by solving for y. Use the slope and y–intercept to graph the equation.
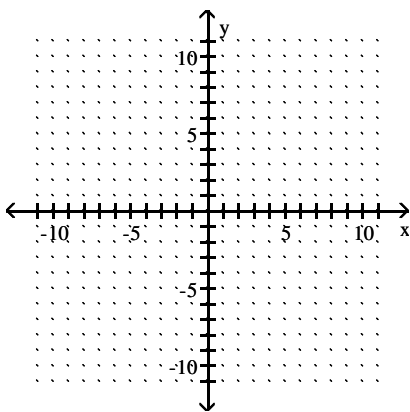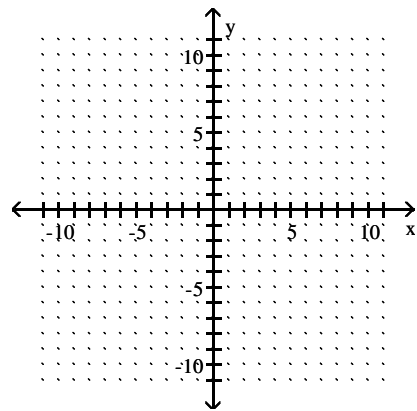
22) $2x + y = 0$

25) $6x + y = 2$

23) $6x + y = 6$

26) $7y = 3x$

Interpret the linear equation.

27) When a tow truck is called, the cost of the service is given by the linear function $y = 2x + 40$, 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 $y = 0.05x + 5.95$ 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 $y = 110 - 6x$, 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 $y = 1200x + 3915$, 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) 8
2) –5
3) – 3
4) $\dfrac{6}{5}$

5) 0
6) –1
7) 6
8) $-\dfrac{5}{6}$

9) 0
10) –1
11) 9
12) – 6
13) 0
14) 0
15) $-\dfrac{9}{7}$

16)
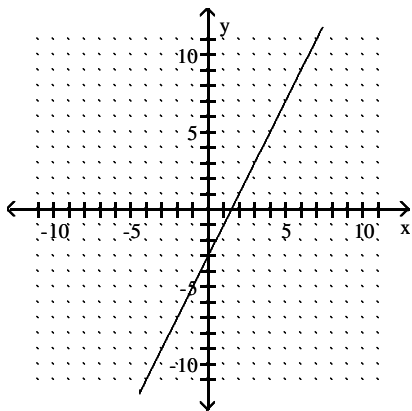
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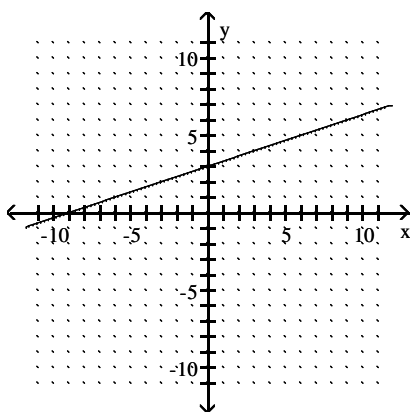
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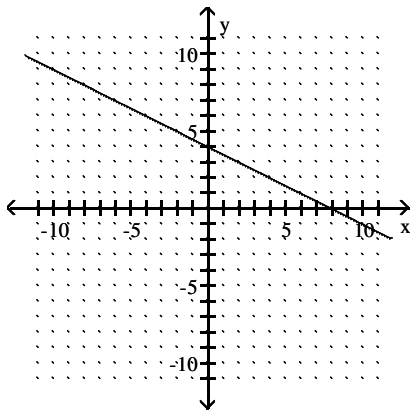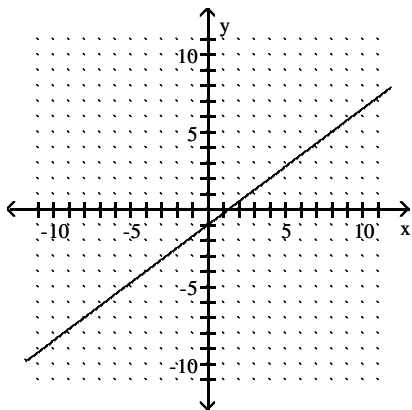

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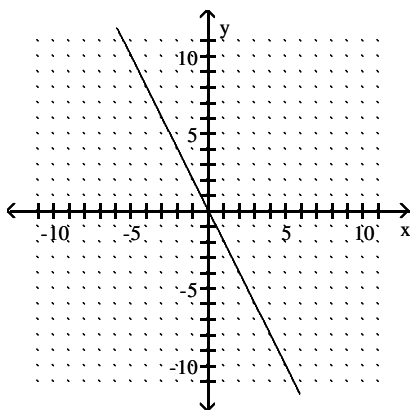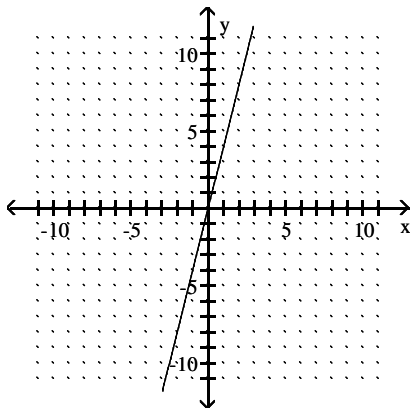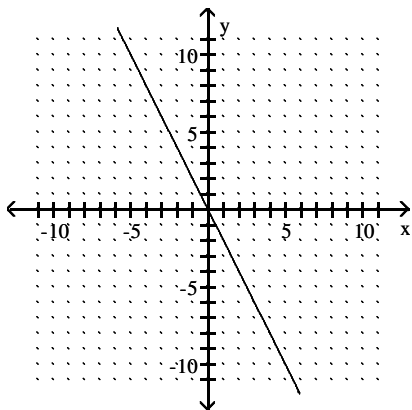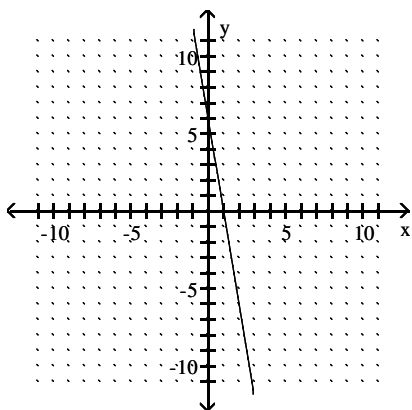
24)

25)

26)

27) m = 2; The cost of the service increases $2 every mile the car is towed. b = 40; The cost of the service is $40 if the car is not towed.
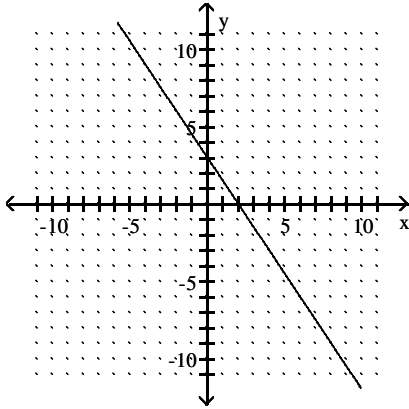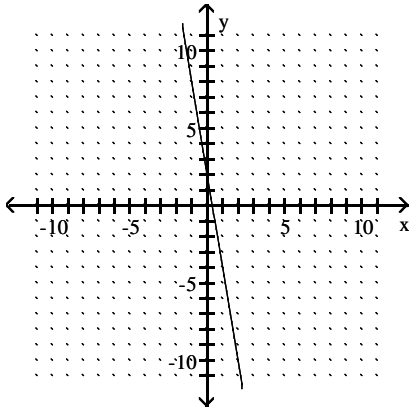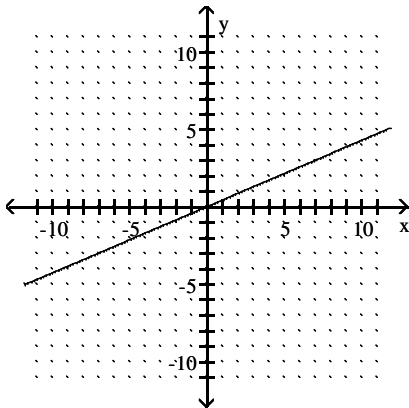
28) m = 0.05; The cost of the long distance service increases $0.05 for every 1 minute called. b = 5.95; The cost of the long distance service is $5.95 if no calls are made for the month.

29) m = –6; The amount of water in the bucket decreases 6 ounces every minute. b = 110; At x = 0, the amount of water in the bucket was 110 ounces.

30) m = 1200; The altitude of the airplane increases 1200 feet every minute. b = 3915; The altitude of the airport where the airplane took–off is 3915 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.