

Name _____

To receive full credit for the assignment you must attach extra sheets of paper to the packet and show your work (write the steps to arrive at each answer).

Determine the slope and the y-intercept.

1) $14y + 3x + 8 = 2 + 3x$

1) _____

A) Slope $\frac{3}{14}$, y-intercept $(0, -\frac{3}{7})$

B) Slope 0, y-intercept $(0, \frac{3}{7})$

C) Slope 0, y-intercept $(0, -\frac{3}{7})$

D) Slope $-\frac{3}{14}$, y-intercept $(0, -\frac{9}{7})$

2) $y = 9x + 4$

2) _____

A) Slope -9, y-intercept (0, 4)

B) Slope 4, y-intercept (0, -9)

C) Slope 9, y-intercept (0, 4)

D) Slope 4, y-intercept (0, 9)

Find the slope of the line containing the two given points.

3) (-4, 5) and (3, 5)

3) _____

A) -10

B) 0

C) Undefined

D) $\frac{10}{7}$

4) (11, -13) and (-6, 2)

4) _____

A) $-\frac{11}{5}$

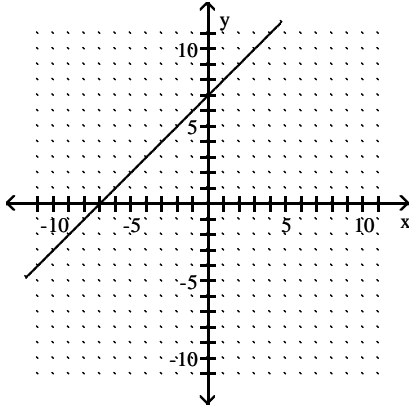
B) $\frac{15}{17}$

C) $-\frac{15}{17}$

D) $-\frac{17}{15}$

Find the slope of the line.

5)



A) 7

B) -1

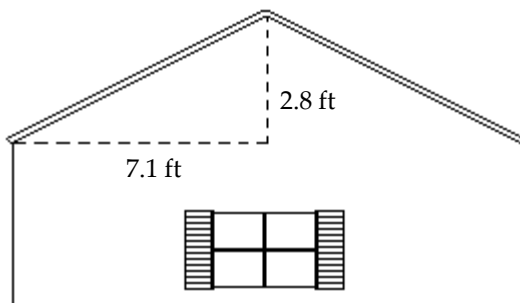
C) 1

D) -7

5) _____

Find the slope (or rate of change). Use appropriate units.

6) Find the slope (or pitch) of the roof.



A) 2.54%

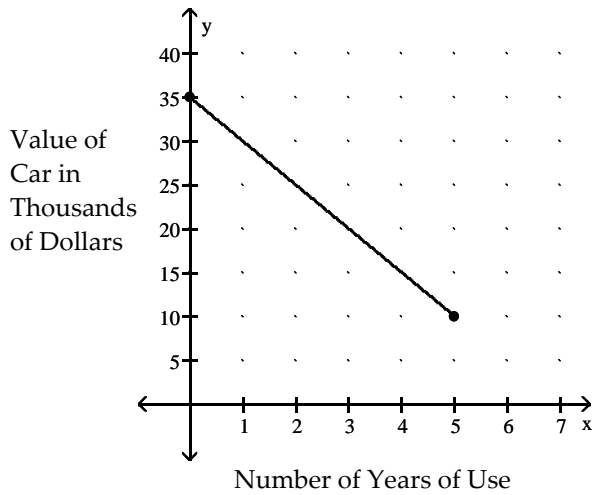
B) 0.39%

C) 253.6%

D) 39.4%

6) _____

7)



- A) \$5000 per year B) -\$6000 per year C) -\$5000 per year D) \$6000 per year

7) _____

If possible, determine the slope.

8) $x = -3$

- A) 0 B) Not defined C) -3 D) $-\frac{1}{3}$

8) _____

9) $4 - 5x = 5 - 2x$

- A) $\frac{1}{3}$ B) $-\frac{1}{3}$ C) 0 D) Not defined

9) _____

10) $y = \frac{2}{3}$

- A) 0 B) $\frac{3}{2}$ C) Not defined D) $\frac{2}{3}$

10) _____

Tell whether the lines are "parallel", "perpendicular", or "neither."

11) $12x + 4y = 16$
 $21x + 7y = 30$

- A) Neither B) Perpendicular C) Parallel

11) _____

12) $y + 20 = -4x$
 $3y = 18x - 19$

- A) Perpendicular B) Parallel C) Neither

12) _____

13) $3x - 2y = -18$ 13) _____
 $2x + 3y = -18$
 A) Parallel B) Neither C) Perpendicular

14) $4x - 2y = 18$ 14) _____
 $3x + 3y = 18$
 A) Perpendicular B) Parallel C) Neither

15) $3x - 8y = 15$ 15) _____
 $32x + 12y = 15$
 A) Parallel B) Neither C) Perpendicular

Find a linear function whose graph has the given slope and y-intercept.

16) Slope $-\frac{3}{4}$, y-intercept $(0, 7)$ 16) _____
 A) $f(x) = -\frac{3}{4}x + 7$ B) $f(x) = \frac{3}{4}x + 7$ C) $f(x) = \frac{3}{4}x - 7$ D) $f(x) = -\frac{3}{4}x - 7$

17) Slope -4 , y-intercept $\left(0, -\frac{2}{5}\right)$ 17) _____
 A) $f(x) = -4x - \frac{2}{5}$ B) $f(x) = -\frac{2}{5}x + 4$ C) $f(x) = -\frac{2}{5}x - 4$ D) $f(x) = -4x + \frac{2}{5}$

18) Slope $-\frac{5}{6}$, y-intercept $\frac{25}{3}$ 18) _____
 A) $f(x) = -\frac{5}{6}x + \frac{25}{3}$ B) $f(x) = \frac{5}{6}x + \frac{25}{3}$
 C) $f(x) = \frac{5}{6}x - \frac{25}{3}$ D) $f(x) = -\frac{5}{6}x - \frac{25}{3}$

Find an equation of the line having the specified slope and containing the indicated point. Write your answer in slope-intercept form.

19) $m = -\frac{3}{5}$; $(10, -2)$ 19) _____
 A) $y = -\frac{3}{5}x + \frac{28}{5}$ B) $y = \frac{3}{5}x - 4$ C) $y = -\frac{3}{5}x + 4$ D) $y = -\frac{3}{5}x + 8$

Find an equation of the line containing the given pair of points

20) (9, -70) and (1, -6)

A) $y = \frac{1}{8}x - \frac{569}{8}$

B) $y = 8x - 142$

C) $y = -8x + 2$

D) $y = -\frac{1}{8}x - \frac{551}{8}$

20) _____

21) $\left(1, \frac{13}{36}\right)$ and $\left(9, \frac{5}{4}\right)$

A) $y = 9x - \frac{9}{4}$

B) $y = \frac{1}{9}x + \frac{311}{324}$

C) $y = \frac{1}{9}x + \frac{1}{4}$

D) $y = 9x - \frac{311}{36}$

21) _____

Write an equation of the line described.

22) Through (-5, -2), parallel to $3x + 5y = 5$

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

B) $y = -\frac{5}{3}x - \frac{2}{3}$

C) $y = -\frac{3}{5}x - 5$

D) $y = 1x + 1$

22) _____

23) Through (-3, -8), perpendicular to $-8x + 7y = 80$

A) $y = \frac{7}{8}x - \frac{85}{8}$

B) $y = -\frac{8}{7}x - \frac{8}{7}$

C) $y = -\frac{7}{8}x - \frac{85}{8}$

D) $y = -\frac{3}{7}x - \frac{80}{7}$

23) _____

24) Through (-9, -4), perpendicular to $x = 7$

A) $y = 4$

B) $y = -4$

C) $y = -9$

D) $y = -9x - 4$

24) _____

Solve the problem.

25) A gas station sells 4820 gallons of regular unleaded gasoline in a day when they charge \$1.35 per gallon, whereas they sell 3884 gallons on a day that they charge \$1.40 per gallon. Find a linear function that expresses gallons sold as a function of price. Use this function to predict the number of gallons sold at a price of \$1.24 per gallon.

A) 6888.19982 gallons

B) 6883.29982 gallons

C) 6879.19982 gallons

D) 6875.89982 gallons

25) _____

26) Persons taking a 30-hour review course to prepare for a standardized exam average a score of 620 on that exam. Persons taking a 70-hour review course average a score of 761. Find a linear function, $S(t)$, which fits this data, and which expresses score as a function of time. Use this function to predict an average score for persons taking a 46-hour review course. Round your answer to the tenths place.

A) 680.6

B) 669.1

C) 690.4

D) 676.4

26) _____

27) A gas station sells 4820 gallons of regular unleaded gasoline on a day when they charge \$1.35 per gallon, whereas they sell 3922 gallons on a day that they charge \$1.40 per gallon. Find a linear function that expresses gallons sold as a function of price. 27) _____

A) $G(p) = -17,960p + 29,082$

B) $G(p) = -17,960p + 29,049.8$

C) $G(p) = -17,960p + 29,044.2$

D) $G(p) = -17,960p + 29,066$

Determine the slope and the y-intercept.

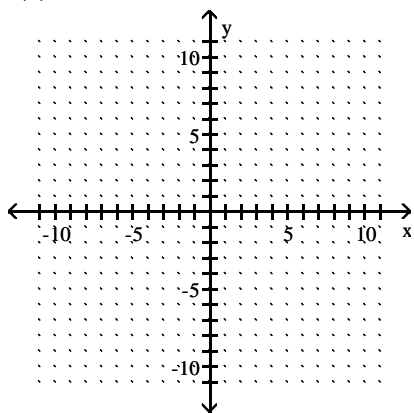
28) $2x - 6y = -12$ 28) _____

Find the slope of the line containing the two given points.

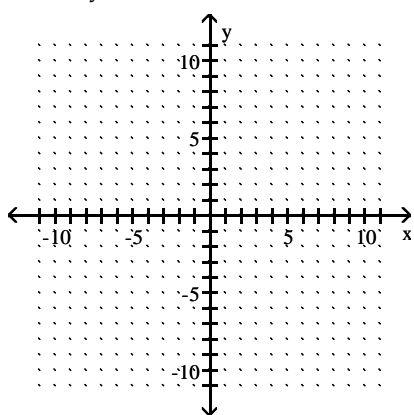
29) (4, 1) and (3, 5) 29) _____

Find the intercepts and then graph the line.

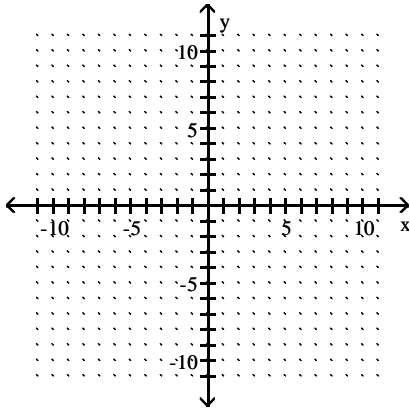
30) $f(x) = -4 - 7x$ 30) _____



31) $5x - 10y = 0$ 31) _____



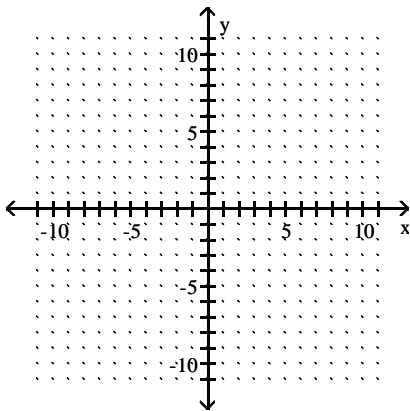
32) $-5x - 15y = 30$



32) _____

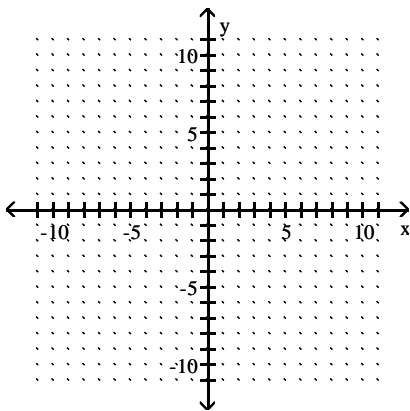
Graph using the slope and the y-intercept.

33) $4x + 3y = 12$



33) _____

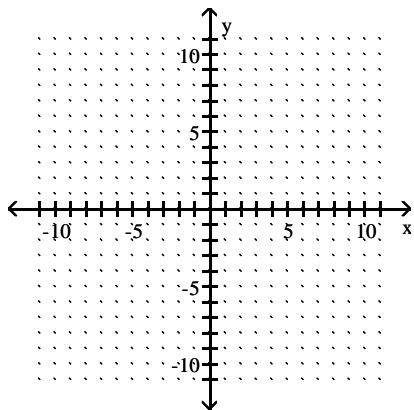
34) $f(x) = -\frac{1}{4}x + 2$



34) _____

35) $y = \frac{1}{2}x - 2$

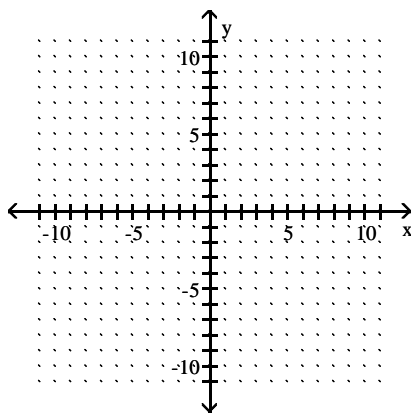
35) _____



Graph.

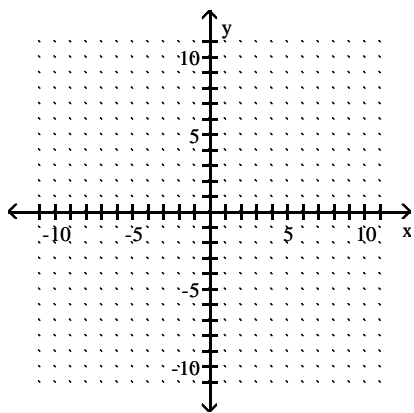
36) $13x = 52$

36) _____

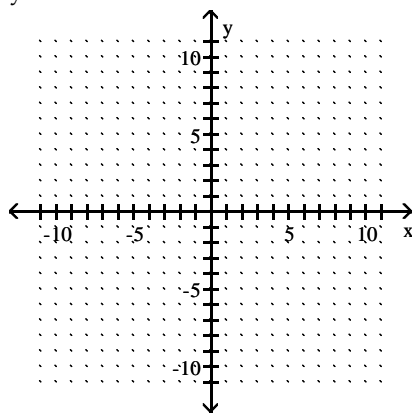


37) $x = -3$

37) _____



38) $y = -3$



38) _____

Tell whether the lines are "parallel", "perpendicular", or "neither."

39) $6x + 2y = 8$
 $24x + 8y = 33$

39) _____

Provide an appropriate response.

40) Explain in your own words why equations of the form $y = b$ have graphs that are horizontal lines.

40) _____

41) If one line has a slope of -3 and another line has a slope of -6 , which line is steeper? Why?

41) _____

Find a linear function whose graph has the given slope and y-intercept.

42) Slope $\frac{7}{4}$, y-intercept $(0, -5)$

42) _____

Find an equation of the line having the specified slope and containing the indicated point. Write your answer in slope-intercept form.

43) $m = -6$; $(-3, 6)$

43) _____

Find an equation of the line containing the given pair of points

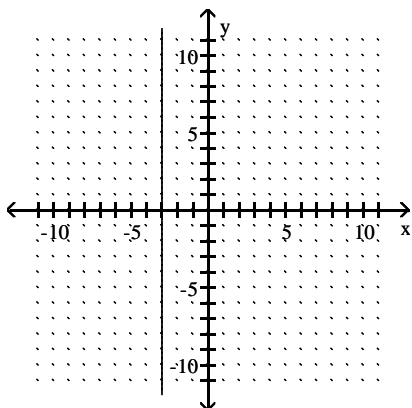
44) $(4, 5)$ and $(5, 9)$

44) _____

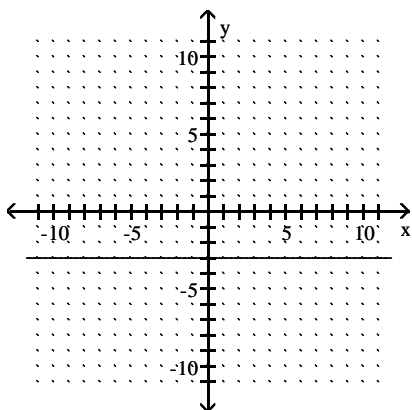
Answer Key

Testname: 11FALL_BCCM203_CH2_PROBS2

37)



38)



39) Parallel

40) The second coordinate of any point on the graph is b , regardless of the first coordinate, so the graph is a line parallel to the x -axis and $|b|$ units above or below it. Thus, the graph is a horizontal line.

41) The line with a slope of -6 is steeper, because the larger the absolute value of the slope, the steeper the line.

42) $f(x) = \frac{7}{4}x - 5$

43) $y = -6x - 12$

44) $y = 4x - 11$