

## Summer Review Assignment

**Simplify each expression.**

1)  $8p(-6p + 2) + 4(3 + p)$

2)  $5(-3n + 3) + 7(5 + n)$

3)  $7(7x - 2) - 7(5x + 1)$

4)  $\frac{15x^2 - 25x}{15x - 25} \div \frac{5x}{3x}$

5)  $\frac{7}{6v} \div \frac{4 - v}{v^2 - 8v + 16}$

6)  $\frac{15a - 10}{5a} \div \frac{15a - 10}{8}$

7)  $\frac{2}{x^2 + x - 42} \div \frac{7x}{42 - x - x^2}$

8)  $\frac{k^2 + 8k + 15}{k + 7} \div \frac{3k^3 + 15k^2}{k + 7}$

**Solve each equation.**

9)  $-2(-10 - 5x) = x - 2(x + 1)$

10)  $4n - 7(1 + 8n) = 5 + 8(9 + 4n)$

11)  $-18 - 18p = 7 + 9(-11 - 2p)$

12)  $3(12 + 5m) = 3(3m - 6)$

**Solve each equation with the quadratic formula.**

13)  $x^2 = 7$

14)  $5r^2 - 5r = -3$

15)  $7n^2 = 17 - 3n$

**Factor each completely.**

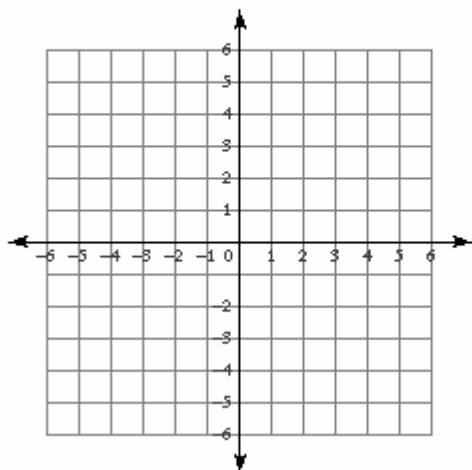
16)  $40b^3 + 25b^2 - 56b - 35$

17)  $5v^3 + 4v^2 - 10v - 8$

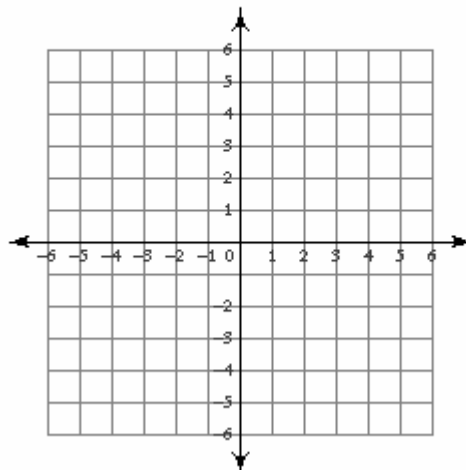
18)  $6x^3 - 30x^2 - 5x + 25$

Sketch the graph of each line.

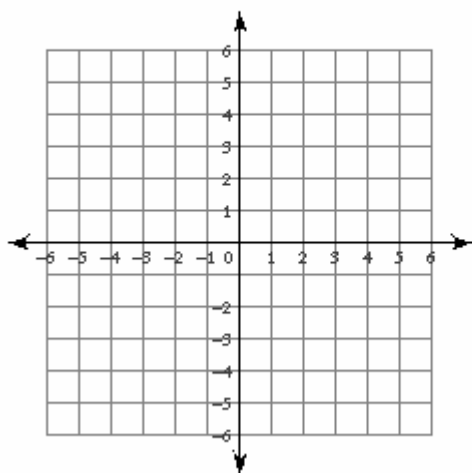
19)  $0 = -3y + 15 - 10x$



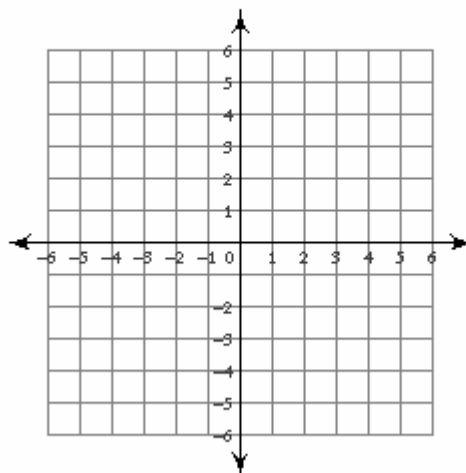
20)  $-2y - 10 = 5x$



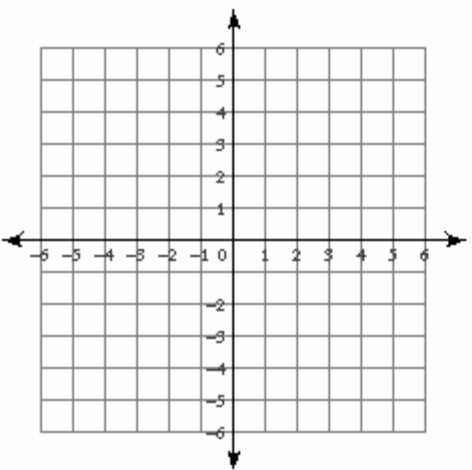
21)  $-1 = x + y$



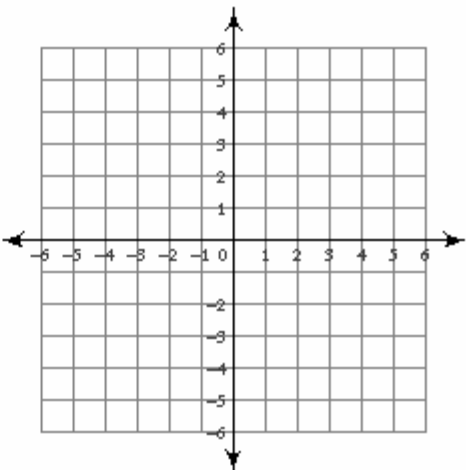
22)  $3x - 12 = 6y$



23)  $3 = y - x$



24)  $-2 + 2y - 3x = 0$



Write the standard form of the equation of the line described.

25) through:  $(-5, -1)$ , perp. to  $y = -\frac{2}{3}x + 5$

26) through:  $(5, -4)$ , perp. to  $y = \frac{1}{7}x + 5$

27) through:  $(-2, -5)$ , perp. to  $y = -\frac{3}{7}x + 4$

28) through:  $(5, 4)$ , perp. to  $y = -5x + 4$

Solve each system by elimination.

29)  $20x - 8y = -28$   
 $10x - 5y = -15$

30)  $12x + 6y = -12$   
 $6x - 7y = -26$

Solve each system by graphing.

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

32)  $y = 6x - 4$   
 $y = x + 1$

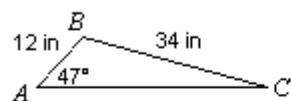
Solve each system by substitution.

33)  $5x - 5y = -10$   
 $y = 0$

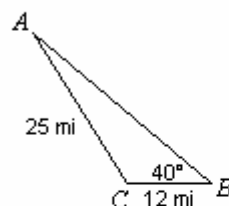
34)  $-2x - 4y = -20$   
 $y = 1$

Find each measurement indicated. Round your answers to the nearest tenth.

35) Find  $m\angle C$

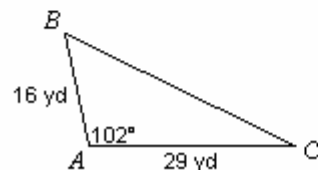


36) Find  $m\angle A$

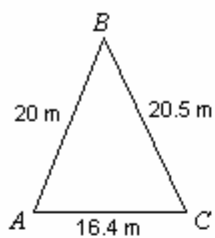


Solve each triangle. Round your answers to the nearest tenth.

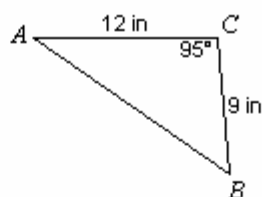
37)



38)

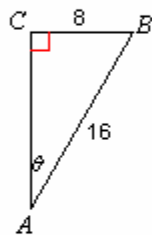


39)

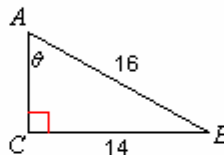


Find the measure of each angle indicated. Round to the nearest tenth.

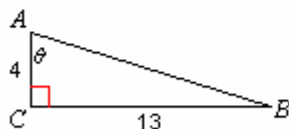
40)



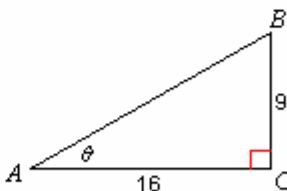
41)



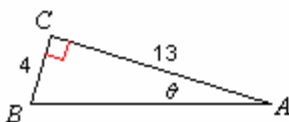
42)



43)

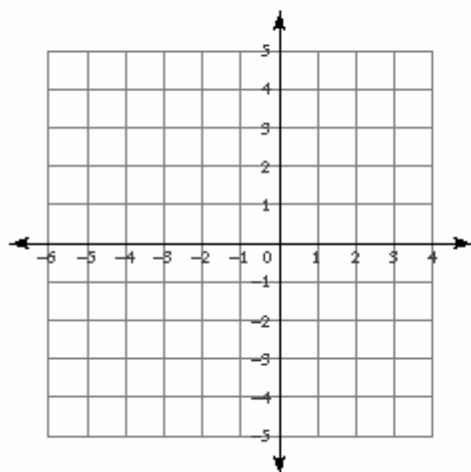


44)

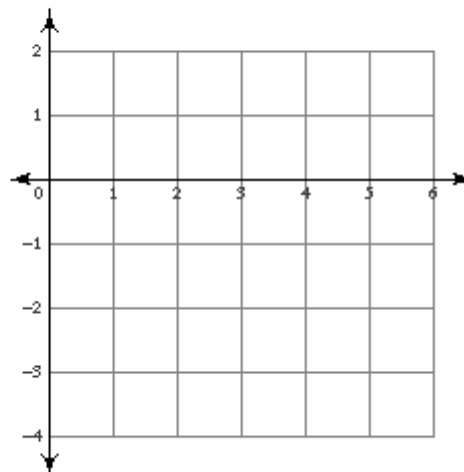


Sketch the graph of each function.

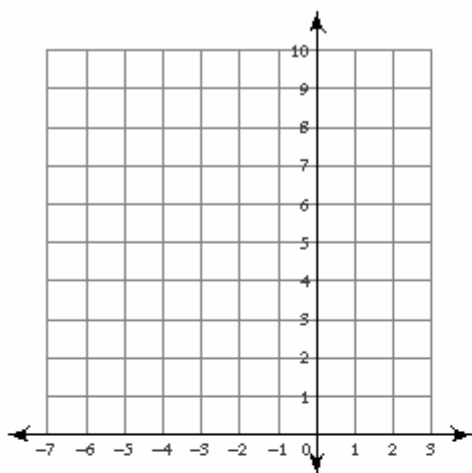
45)  $y = 2x^2 - 8x + 4$



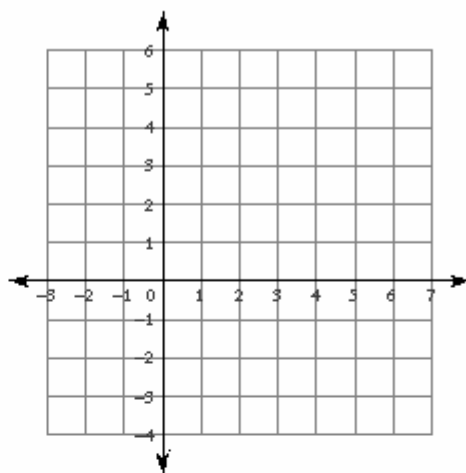
46)  $y = -x^2 + 6x - 8$



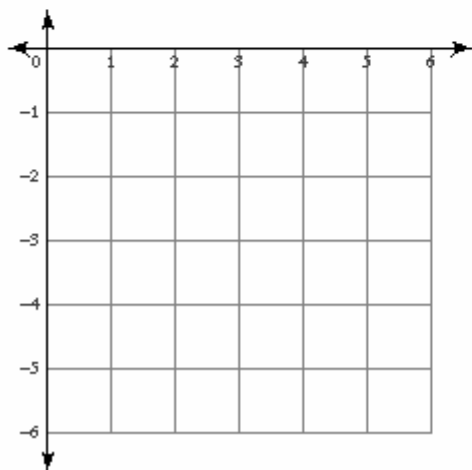
47)  $y = 2x^2 + 12x + 19$



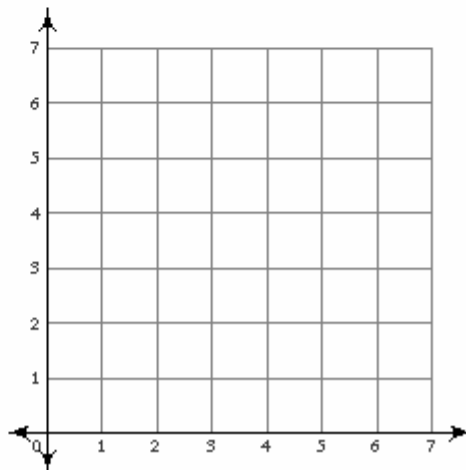
48)  $y = 2x^2 - 12x + 15$



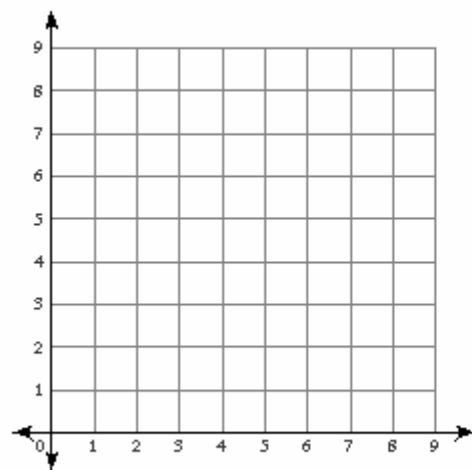
49)  $y = -x^2 + 6x - 10$



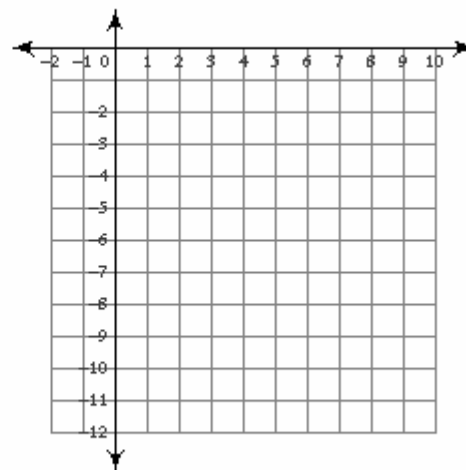
50)  $y = x^2 - 8x + 18$



51)  $y = x^2 - 8x + 20$



52)  $y = -2x^2 + 8x - 11$



**Write the slope-intercept form of the equation of the line through the given point with the given slope.**

53) through:  $(-4, -2)$ , slope =  $\frac{1}{2}$

54) through:  $(-2, 2)$ , slope =  $-\frac{3}{5}$

55) through:  $(-3, 3)$ , slope =  $-\frac{3}{5}$

56) through:  $(-2, -5)$ , slope =  $\frac{5}{7}$

57) through:  $(3, -4)$ , slope =  $-\frac{6}{5}$

58) through:  $(-2, -4)$ , slope = 1

59) through:  $(2, -3)$ , slope = -3

60) through:  $(5, -3)$ , slope =  $-\frac{7}{5}$

## Answers to Summer Review Assignment

1)  $-48p^2 + 20p + 12$

2)  $-8n + 50$

3)  $14x - 21$

4)  $\frac{3x}{5}$

5)  $-\frac{7(v-4)}{6v}$

6)  $\frac{8}{5a}$

7)  $-\frac{2}{7x}$

8)  $\frac{k+3}{3k^2}$

9)  $\{-2\}$

10)  $\{-1\}$

11) No solution.

12)  $\{-9\}$

13)  $\{\sqrt{7}, -\sqrt{7}\}$

14)  $\left\{\frac{5+i\sqrt{35}}{10}, \frac{5-i\sqrt{35}}{10}\right\}$

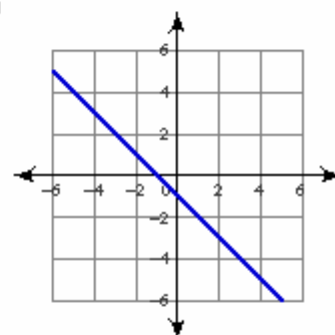
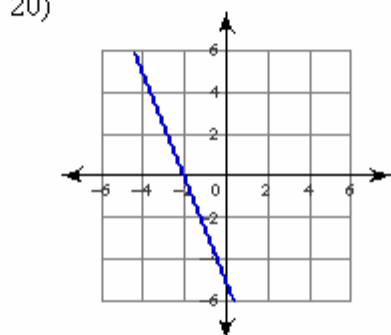
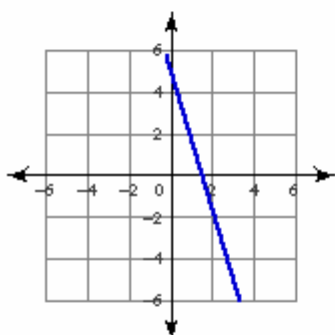
15)  $\left\{\frac{-3+\sqrt{485}}{14}, \frac{-3-\sqrt{485}}{14}\right\}$

16)  $(5b^2 - 7)(8b + 5)$

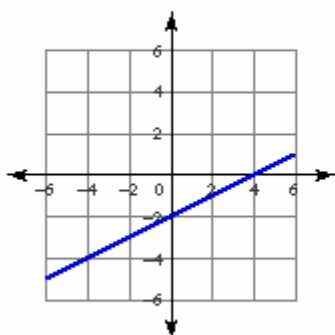
17)  $(v^2 - 2)(5v + 4)$

18)  $(6x^2 - 5)(x - 5)$

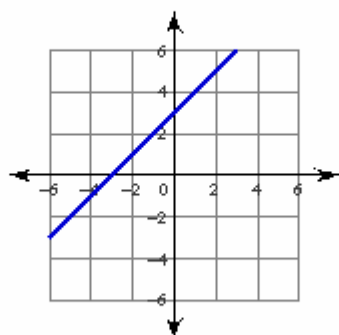
19)



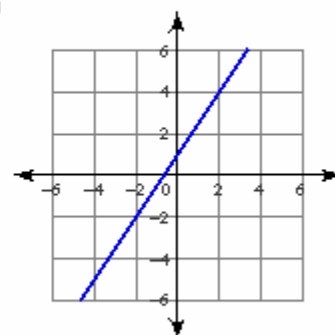
22)



23)



24)



25)  $3x - 2y = -13$

26)  $7x + y = 31$

27)  $7x - 3y = 1$

28)  $x - 5y = -15$

29)  $(-1, 1)$

30)  $(-2, 2)$

31)  $(-2, -1)$

32)  $(1, 2)$

33)  $(-2, 0)$

34)  $(8, 1)$

35)  $15^\circ$

36)  $18^\circ$

37)  $m\angle B = 52.2^\circ, m\angle C = 25.8^\circ, a = 35.9$  yd

38)  $m\angle C = 64.5^\circ, m\angle A = 67.7^\circ, m\angle B = 47.8^\circ$

39)  $m\angle A = 35^\circ, m\angle B = 50^\circ, c = 15.6$  in

40)  $30^\circ$

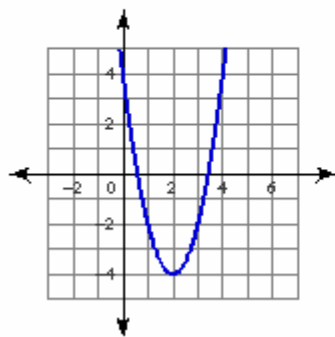
41)  $61^\circ$

42)  $72.9^\circ$

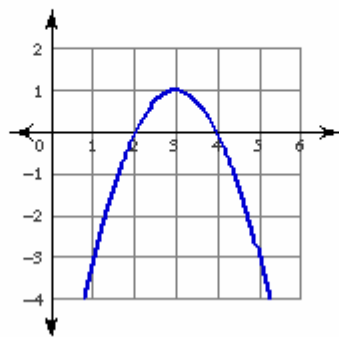
43)  $29.4^\circ$

44)  $17.1^\circ$

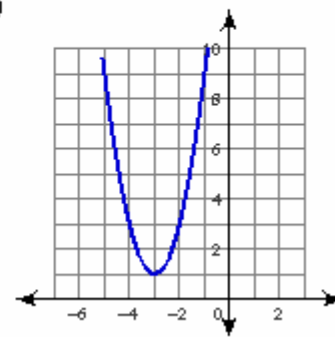
45)



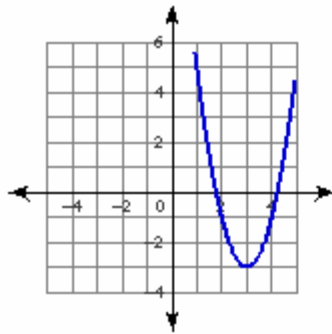
46)



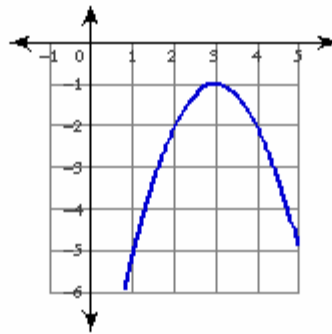
47)



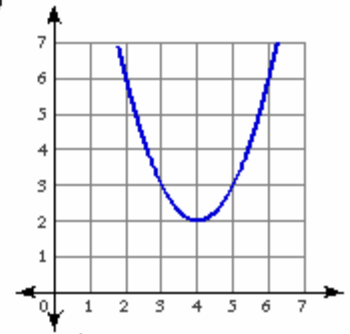
48)



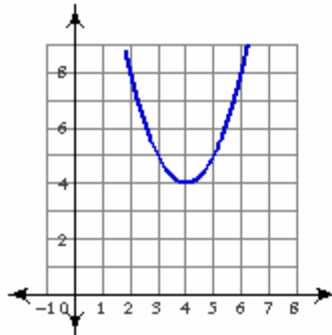
49)



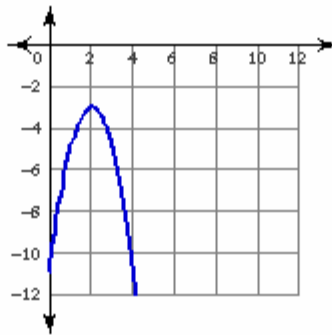
50)



51)



52)



53)  $y = \frac{1}{2}x$

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

55)  $y = -\frac{3}{5}x + \frac{6}{5}$

56)  $y = \frac{5}{7}x - \frac{25}{7}$

57)  $y = -\frac{6}{5}x - \frac{2}{5}$

58)  $y = x - 2$

59)  $y = -3x + 3$

60)  $y = -\frac{7}{5}x + 4$



