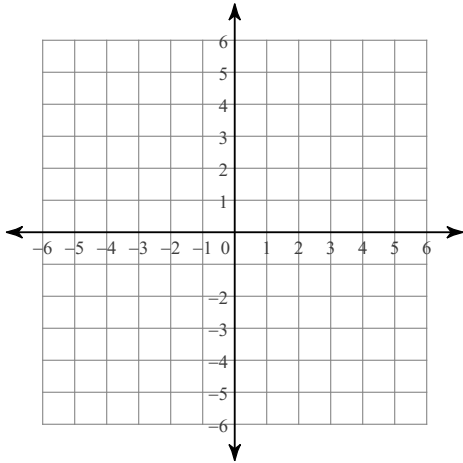


Summer Assignment - Show all Work!

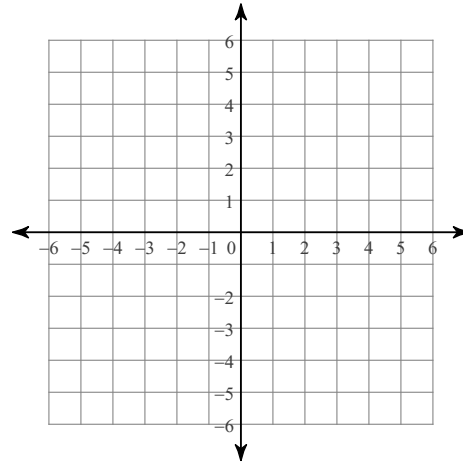
Due Friday 9/6/19 \_\_\_\_\_

Sketch the graph of each line.

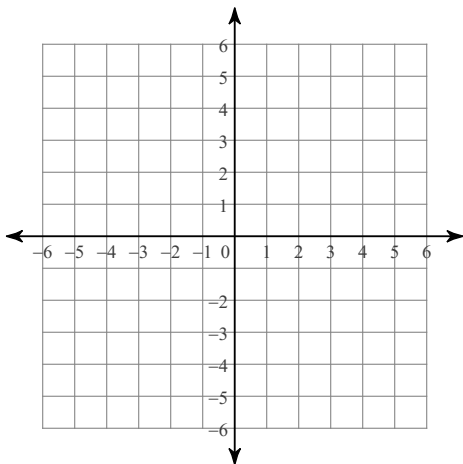
1)  $2x - y = 5$



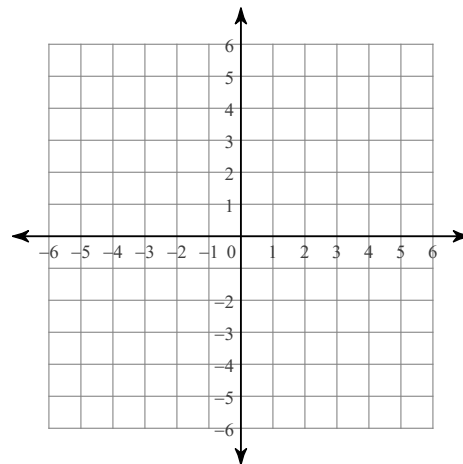
2)  $x + 3y = -9$



3)  $x + 5y = 0$



4)  $x + 4y = -4$



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

5) through:  $(-3, 0)$ , slope =  $-\frac{3}{2}$

6) through:  $(-3, -4)$ , slope =  $\frac{7}{3}$

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

7) through:  $(0, 5)$  and  $(-3, 3)$

8) through:  $(5, -1)$  and  $(0, 5)$

**Write the slope-intercept form of the equation of the line described.**

9) through:  $(-1, 2)$ , parallel to  $y = -7x - 4$

10) through:  $(1, 5)$ , parallel to  $y = 10x - 4$

11) through:  $(3, 5)$ , perp. to  $y = -\frac{1}{3}x - 4$

12) through:  $(-5, -2)$ , perp. to  $y = \frac{5}{2}x - 5$

**Solve each system by elimination.**

13)  $6x - y = -7$   
 $2x - 6y = 26$

14)  $-2x - y = 13$   
 $8x - 4y = 4$

15)  $-x - 2y = 1$   
 $-9x - 3y = 24$

16)  $7x + 5y = 11$   
 $-x - 10y = 17$

**Solve each system by substitution.**

17)  $-3x - 7y = 9$   
 $x - 8y = -3$

18)  $-7x + y = 11$   
 $5x - 3y = -1$

19)  $x + y = 1$   
 $2x + 2y = -3$

20)  $x - 5y = 15$   
 $-3x + 15y = -45$

**Factor each completely.**

21)  $4 - 4n^2$

22)  $25m^2 - 9$

23)  $x^2 + 2x + 1$

24)  $25x^2 - 4$

25)  $n^2 - 16$

26)  $125v^2 - 45$

27)  $5p^2 - 40p + 80$

28)  $2k^2 - 2$

29)  $25n^2 - 10n + 1$

30)  $4m^2 - 20m + 25$

31)  $-x^2 + 8x$

32)  $-2x^3 + 10x^2$

33)  $4x^4 - 28x^3 + 24x^2$

34)  $x^2 - 8x - 20$

35)  $n^3 + 13n^2 + 40n$

36)  $5n^2 - 12n - 32$

37)  $7n^3 - 58n^2 + 63n$

38)  $5x^2 + 44x - 60$

39)  $-10r^4 + 35r^3 - 30r^2$

40)  $-14k^3 + 68k^2 + 10k$

**Solve each equation by taking square roots.**

41)  $4n^2 - 4 = 320$

42)  $2a^2 - 1 = 131$

43)  $3 + 81k^2 = 67$

44)  $5x^2 + 2 = 322$

45)  $-1 - 5x^2 = -3$

46)  $3n^2 + 6 = 3$

**Solve each equation by factoring.**

47)  $x^2 + x - 33 = 4x - 5$

48)  $2n^2 + n - 14 = n^2 - 8$

49)  $-m^2 - 12m = -2m^2 - 35$

50)  $-4r^2 - 9r + 23 = 5 - 5r^2$

51)  $2x^2 + 42 = 19x$

52)  $2n^2 + 11n + 6 = -2n$

53)  $7b^2 - 56 = 41b$

54)  $2v^2 + 3v - 4 = 1$

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

55)  $4x^2 = 8 - 2x$

56)  $6x^2 = 7x + 12$

57)  $6a^2 - 121 = 11a$

58)  $6p^2 = 7p - 1$

$$59) 2k^2 - 11 = -8k$$

$$60) 4x^2 = -x - 7$$

**Factor each completely.**

$$61) 12n^3 + 42n^2 - 2n - 7$$

$$62) 10m^3 + 12m^2 + 15m + 18$$

$$63) 7r^3 + 42r^2 + r + 6$$

$$64) 18x^3 - 24x^2 + 21x - 28$$

$$65) 27a^3 + 125$$

$$66) 8 + x^3$$

$$67) 125m^3 + 216$$

$$68) 216x^3 + 1$$

**Evaluate each function.**

$$69) f(a) = a^2 - 5a; \text{ Find } f(2)$$

$$70) f(x) = x^3 - 4x; \text{ Find } f(3)$$

$$71) k(x) = -2x^2 + 3; \text{ Find } k(7)$$

$$72) w(x) = 2x + 2; \text{ Find } w(7)$$

73)  $h(a) = 3a - 3$ ; Find  $h\left(\frac{n}{4}\right)$

74)  $f(n) = n^2 - 1 - 2n$ ; Find  $f(n + 2)$

75)  $f(a) = a^2 - a$ ; Find  $f(a^2)$

76)  $f(x) = -3x + 3$ ; Find  $f(x + 1)$

State the quadrant in which the terminal side of each angle lies.

77)  $\frac{13\pi}{6}$

78)  $-\frac{19\pi}{6}$

79)  $-\frac{49\pi}{18}$

80)  $\frac{\pi}{3}$

81)  $-\frac{9\pi}{4}$

82)  $-\frac{5\pi}{18}$

83)  $\frac{5\pi}{18}$

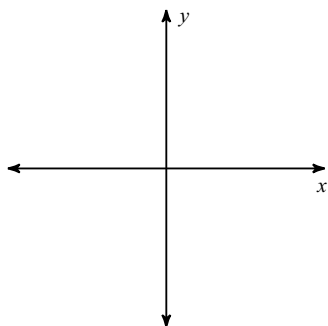
84)  $\frac{31\pi}{9}$

85)  $\frac{2\pi}{3}$

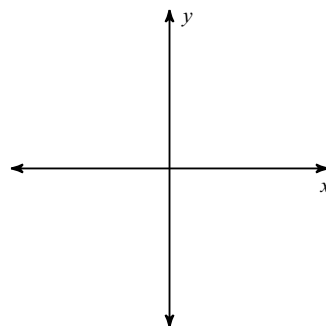
86)  $\frac{35\pi}{9}$

Draw an angle with the given measure in standard position.

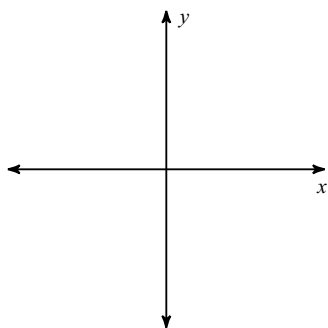
87)  $\frac{3\pi}{4}$



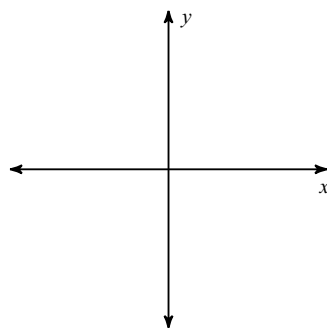
88)  $\frac{4\pi}{3}$



89)  $-\frac{13\pi}{9}$



90)  $-\frac{7\pi}{4}$



**Convert each degree measure into radians.**

91)  $-330^\circ$

92)  $-310^\circ$

93)  $-660^\circ$

94)  $780^\circ$

95)  $45^\circ$

96)  $-45^\circ$

**Convert each radian measure into degrees.**

97)  $\frac{\pi}{4}$

98)  $-\frac{5\pi}{6}$

99)  $\frac{17\pi}{6}$

100)  $\frac{65\pi}{36}$

101)  $-\frac{13\pi}{12}$

102)  $-\frac{49\pi}{18}$

**Find a positive and a negative coterminal angle for each given angle.**

103)  $325^\circ$

104)  $330^\circ$

105)  $-10^\circ$

106)  $660^\circ$

107)  $-\frac{5\pi}{18}$

108)  $\frac{\pi}{2}$

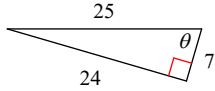


$$109) \frac{41\pi}{18}$$

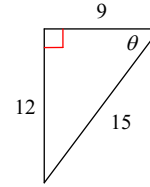
$$110) -\frac{19\pi}{36}$$

**Find the value of the trig function indicated.**

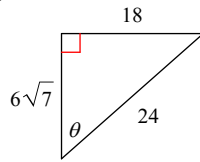
$$111) \tan \theta$$



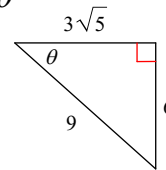
$$112) \sin \theta$$



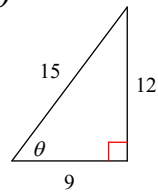
$$113) \csc \theta$$



$$114) \sin \theta$$



$$115) \cos \theta$$



$$116) \sec \theta$$

