

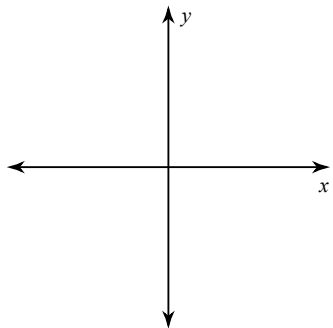
Practice for Q3 Exam2.

Date _____ Period _____

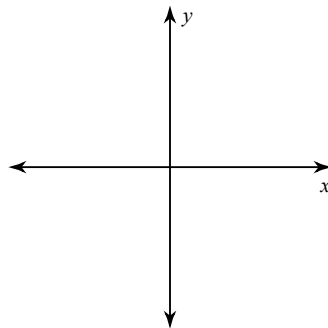
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Draw an angle with the given measure in standard position.

1) 490°



2) -410°

**Find the reference angle.**

3) 410°

4) -370°

5) $\frac{5\pi}{3}$

6) $-\frac{2\pi}{3}$

7) -485°

8) 550°

9) -230°

10) 430°

11) $-\frac{3\pi}{4}$

12) $\frac{23\pi}{6}$

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

14) $-\frac{25\pi}{9}$

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

15) $-\frac{13\pi}{18}$

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

17) 318°

18) -188°

Convert each degree measure into radians.

19) -130°

20) 105°

21) 755°

22) 285°

23) 195°

24) -255°

Convert each radian measure into degrees.

25) $\frac{8\pi}{3}$

26) $\frac{43\pi}{18}$

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

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

29) $-\frac{17\pi}{6}$

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

Find the exact value of each trigonometric function.

31) $\sin 90^\circ$

32) $\sin 870^\circ$

33) $\sin -1020^\circ$

34) $\sin -945^\circ$

35) $\sin -390^\circ$

36) $\sin 450^\circ$

37) $\sin 510^\circ$

38) $\sin 585^\circ$

39) $\sin 315^\circ$

40) $\sin -90^\circ$

41) $\sin 900^\circ$

42) $\sin 240^\circ$

43) $\cos -450^\circ$

Find the area of each triangle to the nearest tenth.

44) In $\triangle PQR$, $q = 9$ mi, $r = 9.3$ mi, $m\angle P = 41^\circ$

45) In $\triangle PKH$, $m\angle P = 64^\circ$, $k = 5$ mi, $h = 10$ mi

46) In $\triangle EFD$, $d = 10$ mi, $m\angle E = 65^\circ$, $f = 7$ mi

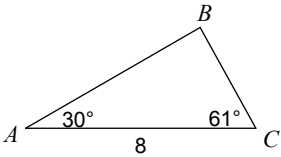
47) In $\triangle DEF$, $m\angle D = 64^\circ$, $f = 7$ cm, $e = 16$ cm

48) In $\triangle QRP$, $r = 9$ yd, $m\angle Q = 126^\circ$, $p = 16$ yd

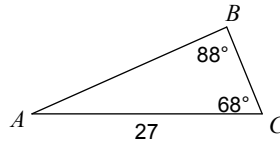
49) In $\triangle XYZ$, $y = 12.3$ m, $z = 9$ m, $m\angle X = 141^\circ$

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

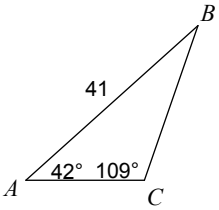
50) Find BC



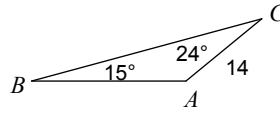
51) Find AB



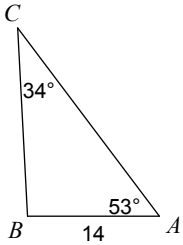
52) Find BC



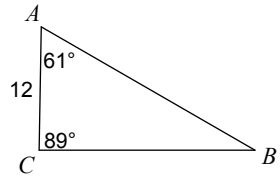
53) Find AB



54) Find BC

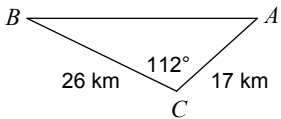


55) Find BC

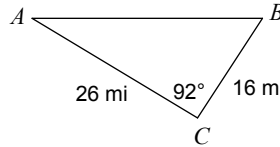


Find each measurement indicated. Round your answers to the nearest tenth. TIP: LOC

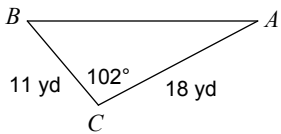
56) Find AB



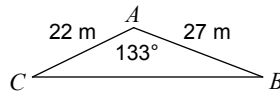
57) Find AB



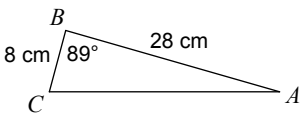
58) Find AB



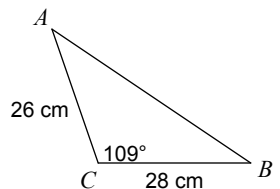
59) Find BC



60) Find AC

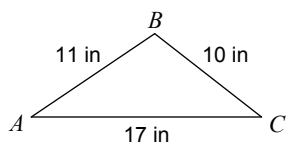


61) Find AB

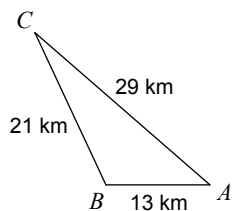


Find each measurement indicated. Round your answers to the nearest tenth. TIP: LOC Big Angle 1st.

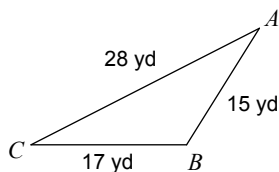
62) Find $m\angle B$



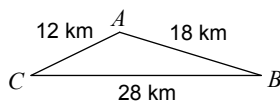
63) Find $m\angle B$



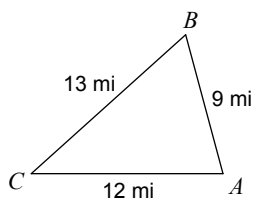
64) Find $m\angle A$



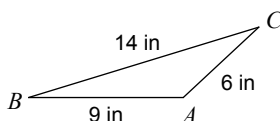
65) Find $m\angle C$



66) Find $m\angle A$



67) Find $m\angle C$



Find each measurement indicated. Round your answers to the nearest tenth. TIP: LOC & Quad Eq.

68) $m\angle B = 132^\circ$, $a = 22$, $b = 8$

Find c

69) $m\angle C = 41^\circ$, $b = 34$, $c = 26$

Find a

70) $m\angle B = 56^\circ$, $a = 24$, $b = 22$

Find c

71) $m\angle A = 40^\circ$, $c = 30$, $a = 12$

Find b

72) $m\angle C = 40^\circ$, $b = 34$, $c = 15$

Find a

73) $m\angle C = 16^\circ$, $b = 26$, $c = 17$

Find a

74) $m\angle B = 118^\circ$, $b = 33$, $a = 14$

Find $m\angle A$

75) $m\angle C = 75^\circ$, $b = 19$, $c = 28$

Find $m\angle B$

76) $m\angle A = 136^\circ$, $a = 27$, $c = 12$

Find $m\angle C$

77) $m\angle C = 156^\circ$, $b = 20$, $c = 47$

Find $m\angle B$

Graph each function using degrees.

78) $y = \frac{1}{2} \sin 3\theta$

79) $y = 3 \cos 3\theta$

80) $y = 3\cos 4\theta$

81) $y = \frac{1}{2}\cos \frac{\theta}{4}$

82) $y = 3\sin \frac{\theta}{2}$

83) $y = 3\sin 3\theta$

Graph each function using radians.

84) $y = \sin \frac{\theta}{4}$

85) $y = 4\cos \frac{\theta}{2}$

86) $y = 3\sin 4\theta$

87) $y = \cos 3\theta$

Graph each function using degrees.

88) $y = 2 + 2\cos (4\theta - 120)$

89) $y = 2\cos (2\theta + 150) - 1$

90) $y = -2 + 3\cos (2\theta - 225)$

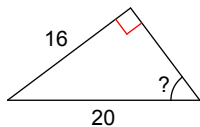
91) $y = -2 + 4\cos (4\theta + 135)$

92) $y = \cos \theta + 2$

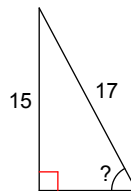
93) $y = 2\sin (2\theta + 135) + 1$

Find the measure of the indicated angle to the nearest degree.

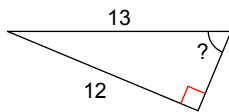
94)



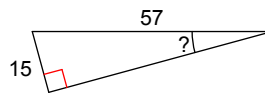
95)



96)



97)

**Using degrees, find the amplitude and period of each function.**

98) $y = 4\cos \left(\frac{\theta}{5} - 150 \right) + 5$

99) $y = -1 + \frac{1}{9}\cos (2\theta + 30)$

100) $y = \cos 4\theta$

101) $y = \frac{1}{3}\sin (4\theta - 210) + 1$

102) $y = 1 + 9\cos \left(\frac{\theta}{7} + 135 \right)$

103) $y = \frac{1}{6}\sin (5\theta + 45) + 2$

Using radians, find the amplitude and period of each function.

$$104) y = \frac{1}{4} \sin \left(4\theta + \frac{\pi}{6} \right) - 5$$

$$105) y = 5 \cos \left(6\theta - \frac{7\pi}{4} \right) - 4$$

$$106) y = 6 \sin \left(\theta - \frac{\pi}{6} \right)$$

$$107) y = 7 \sin \left(\frac{\theta}{7} - \frac{\pi}{3} \right) + 3$$

$$108) y = 9 \cos \left(8\theta + \frac{\pi}{3} \right) - 5$$

$$109) y = \frac{1}{9} \sin \left(7\theta - \frac{\pi}{6} \right) - 4$$

Use the information provided to write the vertex form equation of each parabola.

$$110) y = x^2 + 12x + 30$$

$$111) y = -5x^2 - 10x - 11$$

$$112) y = -2x^2 - 28x - 90$$

$$113) y = -\frac{1}{2}x^2 + 8x - 32$$

$$114) y = x^2 - 18x + 74$$

$$115) y = -x^2 - 20x - 90$$

$$116) y = x^2 - 12x + 44$$

$$117) y = -x^2 - 20x - 93$$

$$118) y = -2x^2 + 16x - 42$$

$$119) y = -x^2 - 10x - 15$$

$$120) y = 4x^2 - 24x + 46$$

$$121) y = x^2 + 16x + 64$$

Use the information provided to write the $ax^2 + bx + c = y$ form of the equation of each parabola.

$$122) y = 6(x - 7)^2 - 8$$

Identify the vertex, focus, axis of symmetry, and directrix of each. Then sketch the graph.

$$123) y = x^2 + 8x + 17$$

$$124) y = \frac{3}{4}x^2 - 6x + 8$$

$$125) y = -\frac{3}{4}x^2 + 6x - 10$$

$$126) y = -x^2 - 8x - 20$$

$$127) y = x^2 - 4x + 3$$

$$128) y = x^2 - 4x + 6$$

$$129) y = x^2 - 8x + 15$$

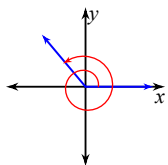
$$130) y = x^2 + 2x - 2$$

$$131) y = -2x^2 - 12x - 18$$

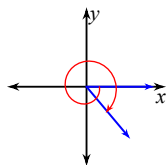
$$132) y = -x^2 + 10x - 30$$

Answers to Practice for Q3 Exam2. (ID: 11)

1)



2)



3) 50°

4) 10°

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

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

7) 55°

8) 10°

9) 50°

10) 70°

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

12) $\frac{\pi}{6}$

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

14) $\frac{2\pi}{9}$

15) $\frac{23\pi}{18}$ and $-\frac{49\pi}{18}$

16) $\frac{11\pi}{4}$ and $-\frac{5\pi}{4}$

17) 678° and -42°

18) 172° and -548°

19) $-\frac{13\pi}{18}$

20) $\frac{7\pi}{12}$

21) $\frac{151\pi}{36}$

22) $\frac{19\pi}{12}$

23) $\frac{13\pi}{12}$

24) $-\frac{17\pi}{12}$

25) 480°

26) 430°

27) 60°

28) 135°

29) -510°

30) 120°

31) 1

32) $\frac{1}{2}$

33) $\frac{\sqrt{3}}{2}$

34) $\frac{\sqrt{2}}{2}$

35) $-\frac{1}{2}$

36) 1

37) $\frac{1}{2}$

38) $-\frac{\sqrt{2}}{2}$

39) $-\frac{\sqrt{2}}{2}$

40) -1

41) 0

42) $-\frac{\sqrt{3}}{2}$

43) 0

44) 27.5 mi²

45) 22.5 mi²

46) 31.7 mi²

47) 50.3 cm²

48) 58.2 yd²

49) 34.8 m²

50) 4

51) 25

52) 29

53) 22

54) 20

55) 21

56) 36 km

57) 31 mi

58) 23 yd

59) 45 m

60) 29 cm

61) 44 cm

62) 108°

63) 115°

64) 31°

65) 26°

66) 75°

67) 26°

68) Not a triangle

69) 39 or 12.3

70) 22.8 or 4

71) Not a triangle

72) Not a triangle

73) 40.4 or 9.5

74) 22°

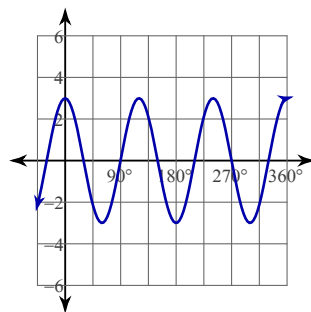
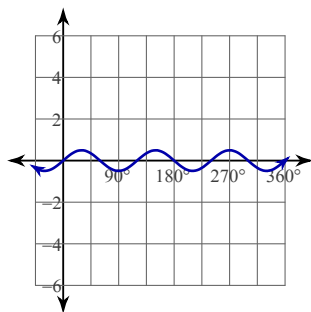
75) 41°

76) 18°

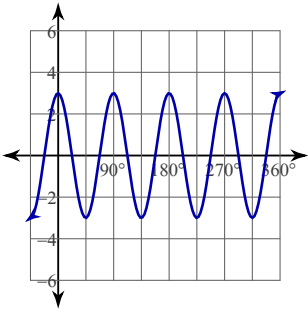
77) 10°

78)

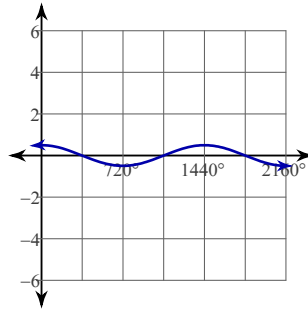
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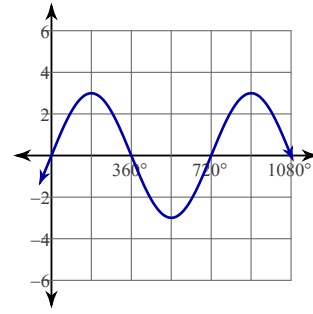
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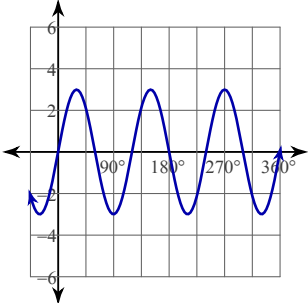
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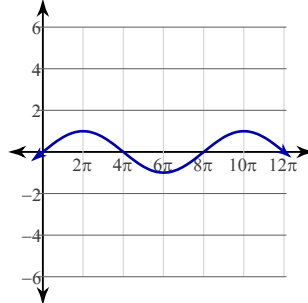
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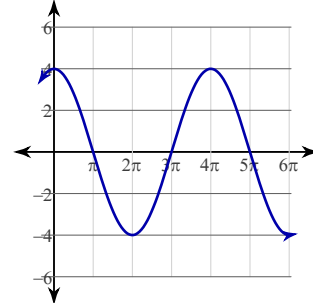
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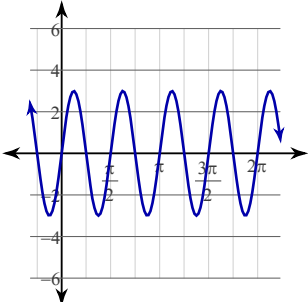
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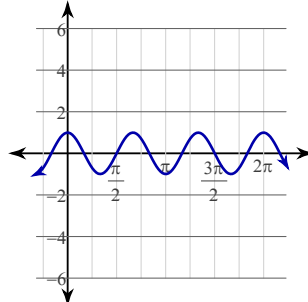
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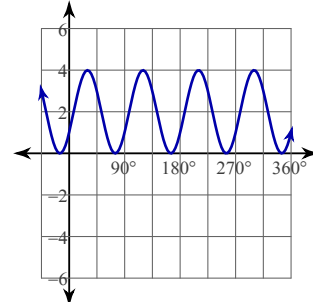
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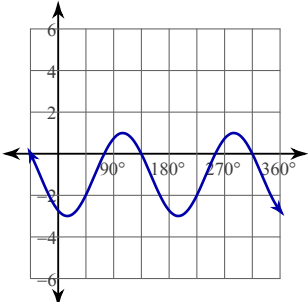
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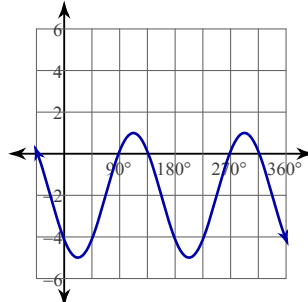
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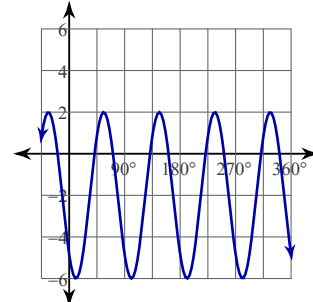
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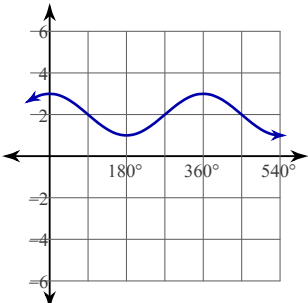
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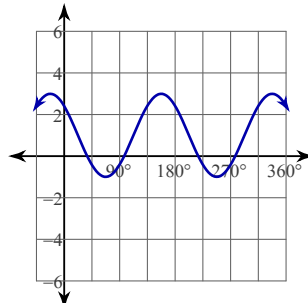
91)



92)



93)



94) 53°

95) 62°

96) 67°

97) 15°

98) Amplitude: 4

Period: 1800°

99) Amplitude: $\frac{1}{9}$

Period: 180°

100) Amplitude: 1

Period: 90°

101) Amplitude: $\frac{1}{3}$

Period: 90°

102) Amplitude: 9

Period: 2520°

103) Amplitude: $\frac{1}{6}$
 Period: 72°

104) Amplitude: $\frac{1}{4}$
 Period: $\frac{\pi}{2}$

105) Amplitude: 5
 Period: $\frac{\pi}{3}$

106) Amplitude: 6
 Period: 2π

107) Amplitude: 7
 Period: 14π

108) Amplitude: 9
 Period: $\frac{\pi}{4}$

109) Amplitude: $\frac{1}{9}$
 Period: $\frac{2\pi}{7}$

110) $y = (x + 6)^2 - 6$

111) $y = -5(x + 1)^2 - 6$

112) $y = -2(x + 7)^2 + 8$

113) $y = -\frac{1}{2}(x - 8)^2$

114) $y = (x - 9)^2 - 7$

115) $y = -(x + 10)^2 + 10$

116) $y = (x - 6)^2 + 8$

117) $y = -(x + 10)^2 + 7$

118) $y = -2(x - 4)^2 - 10$

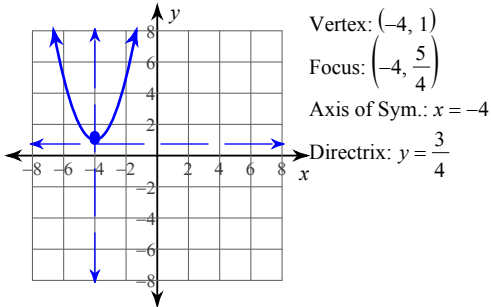
119) $y = -(x + 5)^2 + 10$

120) $y = 4(x - 3)^2 + 10$

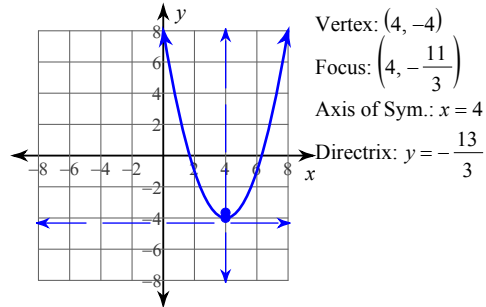
121) $y = (x + 8)^2$

122) $y = 6x^2 - 84x + 286$

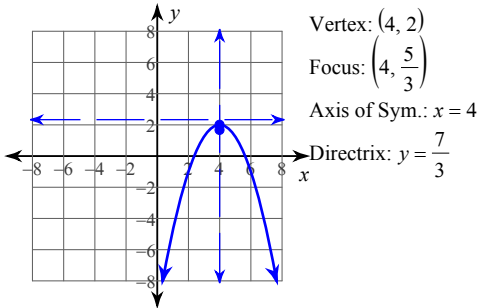
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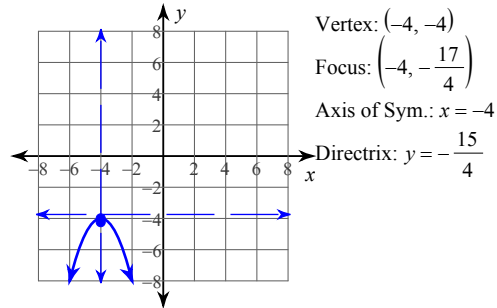
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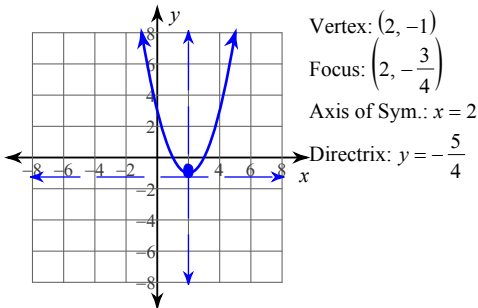
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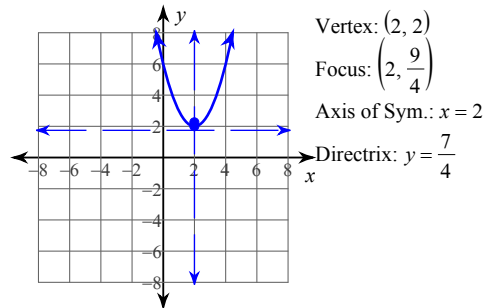
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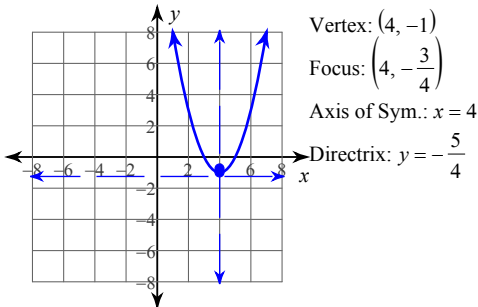
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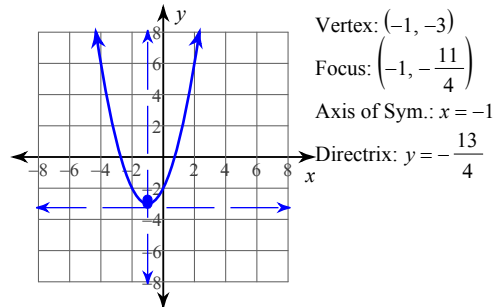
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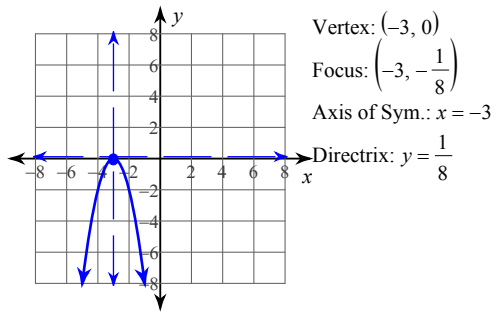
129)



130)



131)



132)

