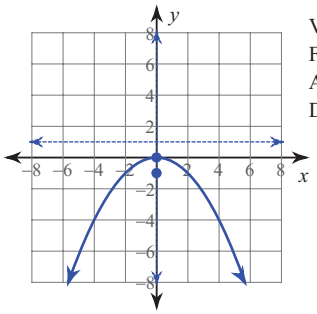
Answers to REVIEW WS SECTIONS 10.1-10.5

1) $\sqrt{29}; \left(-1, \frac{5}{2}\right)$

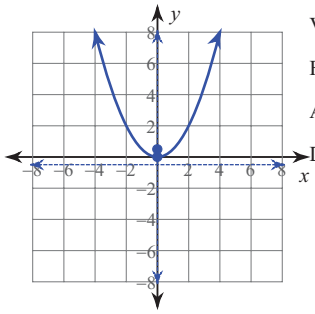
2) $3; \left(3, \frac{9}{2}\right)$

3)



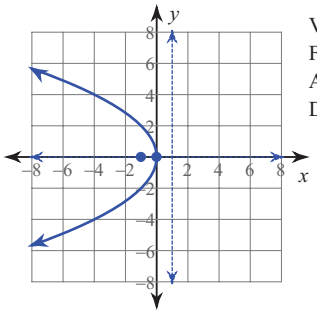
Vertex: $(0, 0)$
Focus: $(0, -1)$
Axis of Sym.: $x = 0$
Directrix: $y = 1$

4)



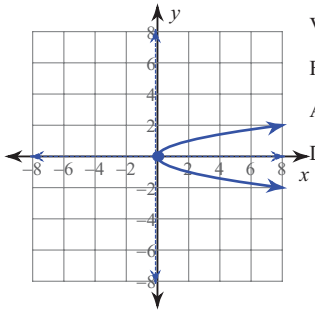
Vertex: $(0, 0)$
Focus: $\left(0, \frac{1}{2}\right)$
Axis of Sym.: $x = 0$
Directrix: $y = -\frac{1}{2}$

5)



Vertex: $(0, 0)$
Focus: $(-1, 0)$
Axis of Sym.: $y = 0$
Directrix: $x = 1$

6)



Vertex: $(0, 0)$
Focus: $\left(\frac{1}{8}, 0\right)$
Axis of Sym.: $y = 0$
Directrix: $x = -\frac{1}{8}$

7) $4y = x^2$

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

9) $y = x^2$

10) $2x = y^2$

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

12) $\frac{1}{2}x = y^2$

13) $x = y^2$

14) $-\frac{1}{3}x = y^2$

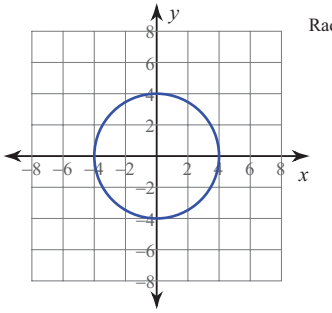
15) $4x = y^2$

16) $-y = x^2$

17) $\frac{1}{2}y = x^2$

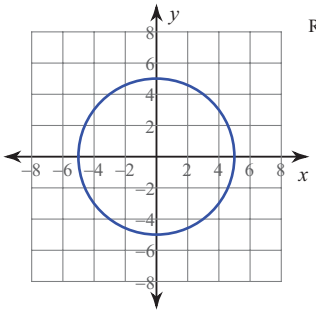
18) $2y = x^2$

19)



Radius: 4

20)



Radius: 5

21) $x^2 + y^2 = 49$

22) $x^2 + y^2 = 104$

23) $x^2 + y^2 = 80$

24) $x^2 + y^2 = 68$

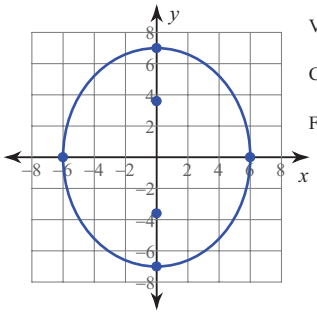
25) $x^2 + y^2 = 1$

26) $x^2 + y^2 = 16$

27) $y = -2x + 5$

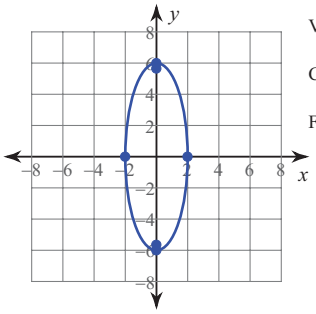
28) $y = 8x + 65$

29)



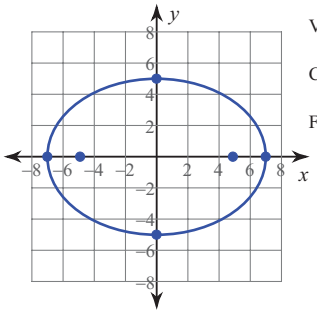
Vertices: $(0, 7)$, $(0, -7)$
Co-vertices: $(6, 0)$, $(-6, 0)$
Foci: $(0, \sqrt{13})$, $(0, -\sqrt{13})$

30)



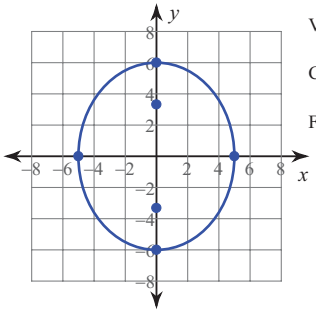
Vertices: $(0, 6)$, $(0, -6)$
Co-vertices: $(2, 0)$, $(-2, 0)$
Foci: $(0, 4\sqrt{2})$, $(0, -4\sqrt{2})$

31)



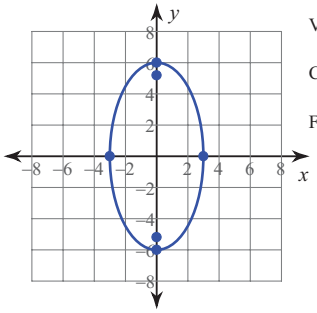
Vertices: $(7, 0)$, $(-7, 0)$
Co-vertices: $(0, 5)$, $(0, -5)$
Foci: $(2\sqrt{6}, 0)$, $(-2\sqrt{6}, 0)$

32)



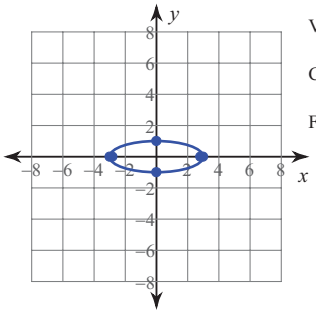
Vertices: $(0, 6)$, $(0, -6)$
Co-vertices: $(5, 0)$, $(-5, 0)$
Foci: $(0, \sqrt{11})$, $(0, -\sqrt{11})$

33)



Vertices: $(0, 6)$, $(0, -6)$
Co-vertices: $(3, 0)$, $(-3, 0)$
Foci: $(0, 3\sqrt{3})$, $(0, -3\sqrt{3})$

34)



Vertices: $(3, 0)$, $(-3, 0)$
Co-vertices: $(0, 1)$, $(0, -1)$
Foci: $(2\sqrt{2}, 0)$, $(-2\sqrt{2}, 0)$

35) $\frac{x^2}{9} + \frac{y^2}{25} = 1$

36) $\frac{x^2}{64} + \frac{y^2}{121} = 1$

37) $\frac{x^2}{9} + \frac{y^2}{144} = 1$

38) $\frac{x^2}{16} + \frac{y^2}{25} = 1$

39) $\frac{x^2}{144} + \frac{y^2}{169} = 1$

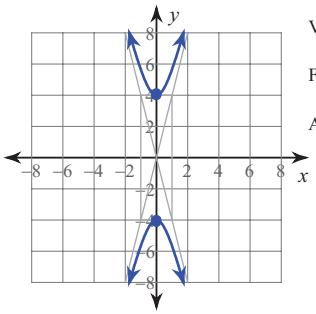
40) $\frac{x^2}{9} + \frac{y^2}{25} = 1$

41) $\frac{x^2}{9} + \frac{y^2}{25} = 1$

42) $\frac{x^2}{169} + \frac{y^2}{144} = 1$

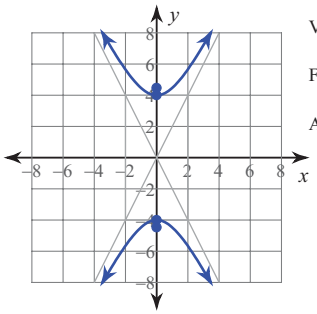
43) $\frac{x^2}{25} + \frac{y^2}{16} = 1$

44)



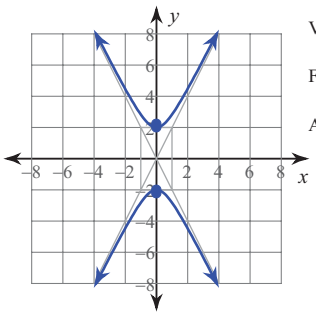
Vertices: $(0, 4)$, $(0, -4)$
Foci: $(0, \sqrt{17})$, $(0, -\sqrt{17})$
Asym.: $y = 4x$, $y = -4x$

45)



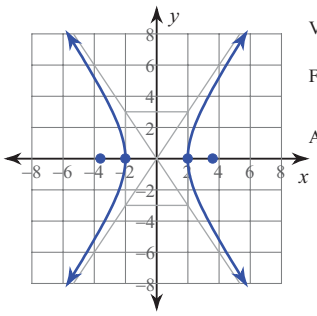
Vertices: $(0, 4)$, $(0, -4)$
Foci: $(0, 2\sqrt{5})$, $(0, -2\sqrt{5})$
Asym.: $y = 2x$, $y = -2x$

46)



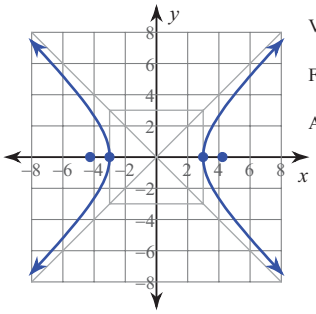
Vertices: $(0, 2)$
$(0, -2)$
Foci: $(0, \sqrt{5})$
$(0, -\sqrt{5})$
Asym.: $y = 2x$
$y = -2x$

47)



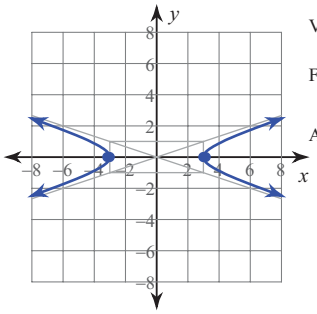
Vertices: $(2, 0)$
$(-2, 0)$
Foci: $(\sqrt{13}, 0)$
$(-\sqrt{13}, 0)$
Asym.: $y = \frac{3}{2}x$
$y = -\frac{3}{2}x$

48)



Vertices: $(3, 0)$
$(-3, 0)$
Foci: $(3\sqrt{2}, 0)$
$(-3\sqrt{2}, 0)$
Asym.: $y = x$
$y = -x$

49)



Vertices: $(3, 0)$
$(-3, 0)$
Foci: $(\sqrt{10}, 0)$
$(-\sqrt{10}, 0)$
Asym.: $y = \frac{1}{3}x$
$y = -\frac{1}{3}x$

50) $\frac{y^2}{16} - \frac{x^2}{9} = 1$

51) $\frac{y^2}{144} - \frac{x^2}{25} = 1$

52) $\frac{x^2}{25} - \frac{y^2}{144} = 1$

53) $\frac{x^2}{9} - \frac{y^2}{16} = 1$