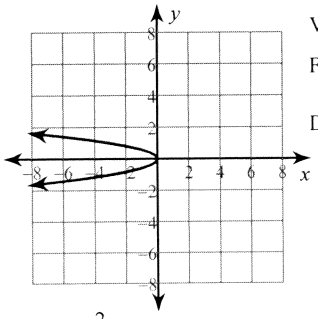
Answers to Chapter 10 Practice "Tuiz" (ID: 1)

1)

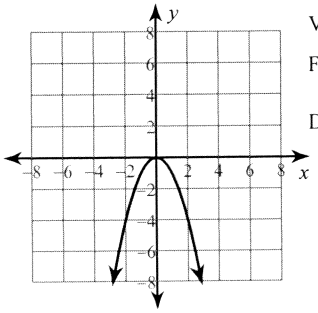


Vertex: $(0, 0)$

Focus: $\left(-\frac{1}{12}, 0\right)$

Directrix: $x = \frac{1}{12}$

2)



Vertex: $(0, 0)$

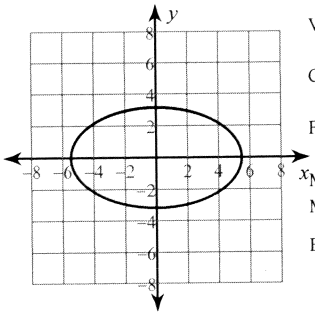
Focus: $\left(0, -\frac{1}{4}\right)$

Directrix: $y = \frac{1}{4}$

3) $y = -x^2$

4) $x = 2y^2$

5)



Vertices: $(\sqrt{30}, 0)$
$(-\sqrt{30}, 0)$

Co-vertices: $(0, \sqrt{10})$
$(0, -\sqrt{10})$

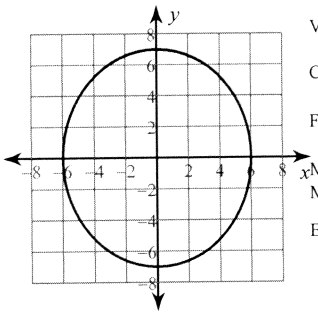
Foci: $(2\sqrt{5}, 0)$
$(-2\sqrt{5}, 0)$

Major Axis: $2\sqrt{30}$ units

Minor Axis: $2\sqrt{10}$ units

Eccentricity: $\frac{\sqrt{6}}{3} \approx 0.816$

6)



Vertices: $(0, 7)$
$(0, -7)$

Co-vertices: $(6, 0)$
$(-6, 0)$

Foci: $(0, \sqrt{13})$
$(0, -\sqrt{13})$

Major Axis: 14 units

Minor Axis: 12 units

Eccentricity: $\frac{\sqrt{13}}{7} \approx 0.515$

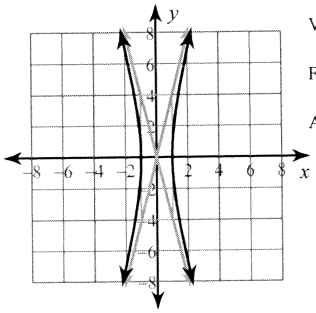
7) $\frac{x^2}{144} + \frac{y^2}{49} = 1$

8) $\frac{x^2}{36} + \frac{y^2}{169} = 1$

9) $\frac{x^2}{49} + \frac{y^2}{25} = 1$

10) $\frac{x^2}{9} + \frac{y^2}{49} = 1$

11)

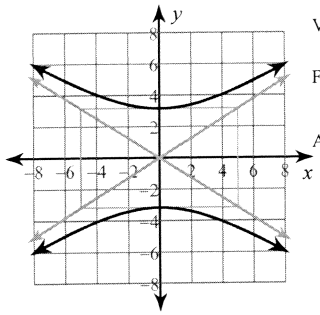


Vertices: $(1, 0)$
$(-1, 0)$

Foci: $(\sqrt{17}, 0)$
$(-\sqrt{17}, 0)$

Asym.: $y = 4x$
$y = -4x$

12)



Vertices: $(0, \sqrt{10})$
$(0, -\sqrt{10})$

Foci: $(0, \sqrt{35})$
$(0, -\sqrt{35})$

Asym.: $y = \frac{x\sqrt{10}}{5}$
$y = -\frac{x\sqrt{10}}{5}$

13) $\frac{y^2}{81} - \frac{x^2}{121} = 1$

14) $\frac{x^2}{64} - \frac{y^2}{100} = 1$

15) $\frac{y^2}{121} - \frac{x^2}{25} = 1$

16) $x^2 - \frac{y^2}{4} = 1$