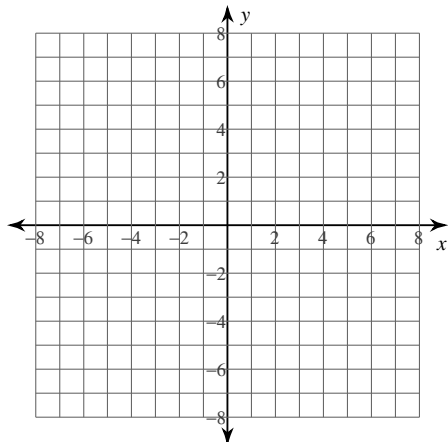


Assignment

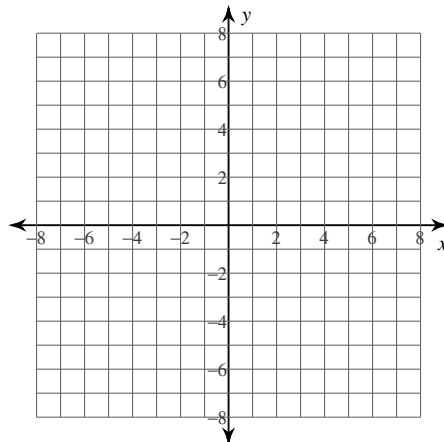
© 2013 Kuta Software LLC. All rights reserved.

Identify the center, vertices, foci, length of the major axis, and length of the minor axis of each. Then sketch the graph.

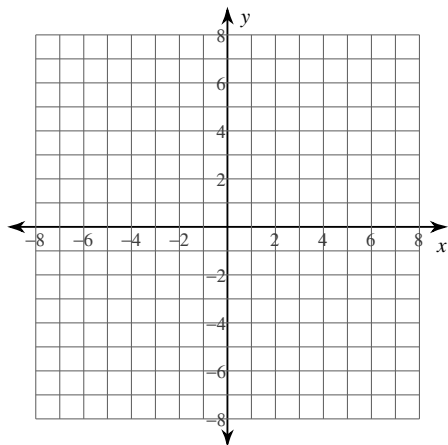
$$1) \frac{x^2}{16} + \frac{y^2}{36} = 1$$



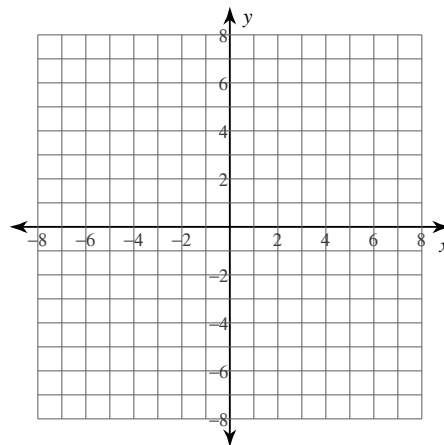
$$2) x^2 + \frac{y^2}{16} = 1$$



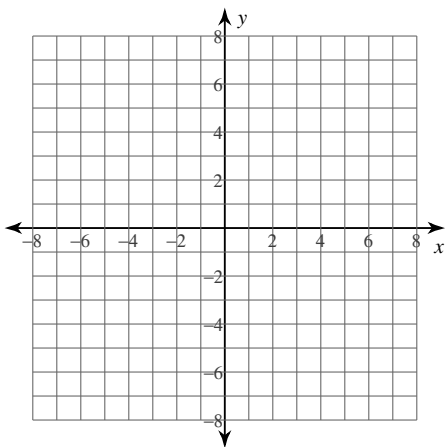
$$3) \frac{(x-1)^2}{9} + \frac{y^2}{49} = 1$$



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



$$5) \frac{x^2}{49} + (y + 5)^2 = 1$$



Use the information provided to write the standard form equation of each ellipse.

6) Vertices: $(0, 5), (0, -5)$
 Foci: $(0, 3), (0, -3)$

7) Vertices: $(0, 13), (0, -13)$
 Foci: $(0, 5), (0, -5)$

8) Vertices: $(0, 13), (0, -13)$
 Foci: $(0, 12), (0, -12)$

9) Endpoints of major axis: $(9, 0), (-9, 0)$
 Endpoints of minor axis: $(0, 1), (0, -1)$

10) Endpoints of major axis: $(0, 9), (0, -9)$
 Endpoints of minor axis: $(4, 0), (-4, 0)$

11) Endpoints of major axis: $(0, 9), (0, -9)$
 Endpoints of minor axis: $(7, 0), (-7, 0)$

12) Endpoints of major axis: $(3, 7), (-19, 7)$
 Endpoints of minor axis: $(-8, 13), (-8, 1)$

13) Endpoints of major axis: $(-1, -9), (-17, -9)$
 Endpoints of minor axis: $(-9, -4), (-9, -14)$

14) Endpoints of major axis: $(16, -3), (-8, -3)$
 Endpoints of minor axis: $(4, 3), (4, -9)$

15) Center: $(0, 0)$
Focus: $(-3\sqrt{15}, 0)$
Width: 24

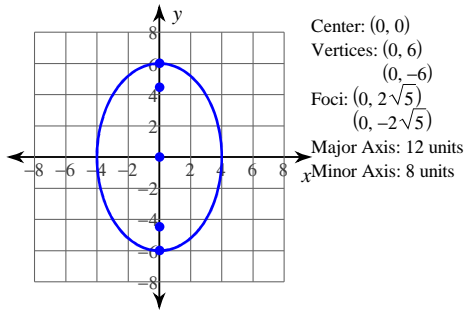
16) Center: $(0, 0)$
Focus: $(-2\sqrt{21}, 0)$
Width: 20

17) Center: $\left(-\frac{19}{2}, -\frac{7}{2}\right)$
Focus: $\left(\frac{2\sqrt{19} - 19}{2}, -\frac{7}{2}\right)$
Width: 20

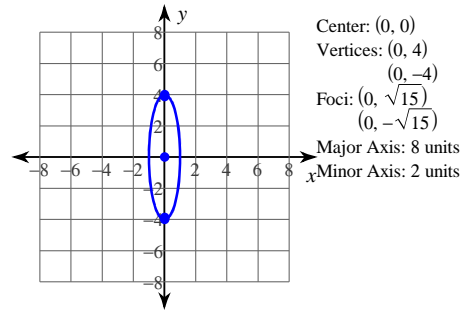
18) Center: $(-8, 3)$
Focus: $(-8 + 2\sqrt{3}, 3)$
Height: 4

Answers to Assignment (ID: 1)

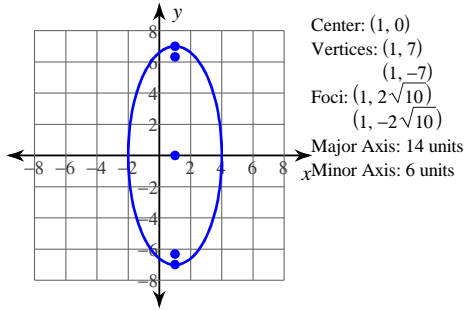
1)



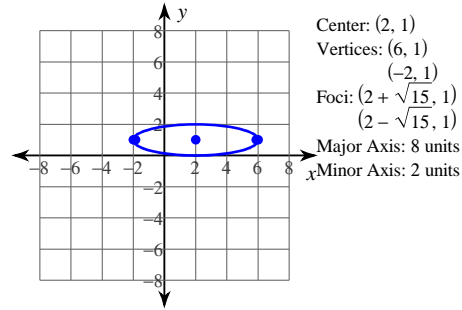
2)



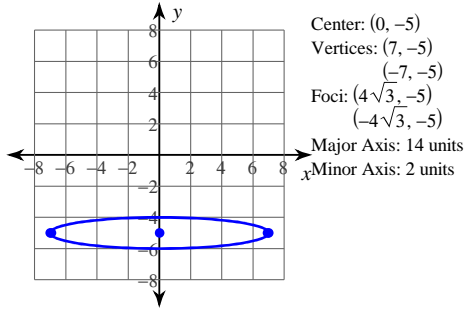
3)



4)



5)



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

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

8) $\frac{x^2}{25} + \frac{y^2}{169} = 1$

9) $\frac{x^2}{81} + y^2 = 1$

10) $\frac{x^2}{16} + \frac{y^2}{81} = 1$

11) $\frac{x^2}{49} + \frac{y^2}{81} = 1$

12) $\frac{(x+8)^2}{121} + \frac{(y-7)^2}{36} = 1$

13) $\frac{(x+9)^2}{64} + \frac{(y+9)^2}{25} = 1$

14) $\frac{(x-4)^2}{144} + \frac{(y+3)^2}{36} = 1$

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

16) $\frac{x^2}{100} + \frac{y^2}{16} = 1$

17) $\frac{\left(x + \frac{19}{2}\right)^2}{100} + \frac{\left(y + \frac{7}{2}\right)^2}{81} = 1$

18) $\frac{(x+8)^2}{16} + \frac{(y-3)^2}{4} = 1$