

Graph the ellipse and identify the following:

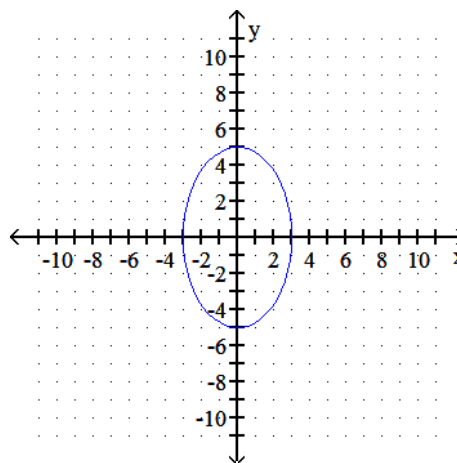
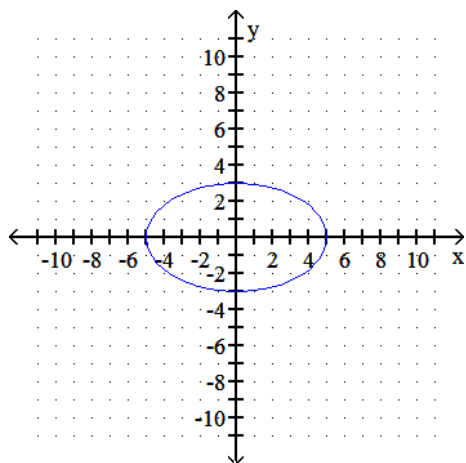
- a) Center _____ b) a _____ (length of major axis) _____ c) b: _____ (length of minor axis) _____
 d) End points of minor axis: _____ e) vertices: _____ f) foci: _____

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

1) _____

- A) a) (0,0) b) a = 3, length: 6
 c) b = 5, length: 10 d) (3,0); (-3,0)
 e) (0,5); (0,-5) f) (0,4); (0,-4)

- B) a) (0,0) b) a = 5, length: 10
 c) b = 3, length: 6 d) (3,0); (-3,0)
 e) (0,5); (0,-5) f) (0,4); (0,-4)



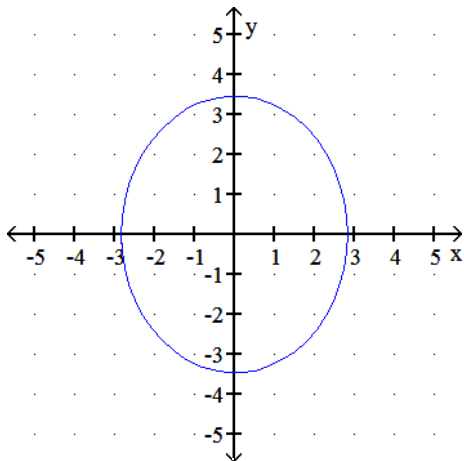
Graph the ellipse and identify the following:

- a) Center _____ b) a _____ (length of major axis) _____ c) b: _____ (length of minor axis) _____
 d) End points of minor axis: _____ e) vertices: _____ f) foci: _____

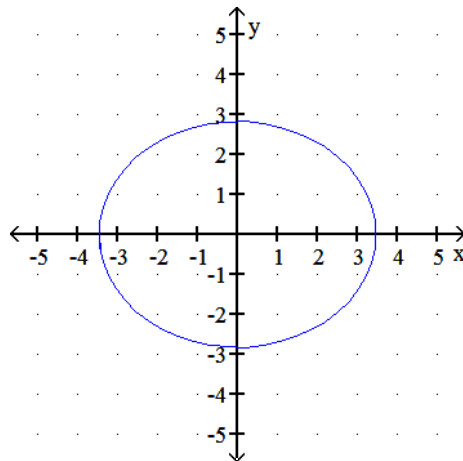
2) $\frac{x^2}{12} + \frac{y^2}{8} = 1$

2) _____

A)



B)



Write the standard form of an equation of the ellipse subject to the given conditions.

- 3) Vertices: (-10, 0), (10, 0)

3) _____

Foci: (-8, 0), (8, 0)

A) $\frac{x^2}{100} + \frac{y^2}{36} = 1$

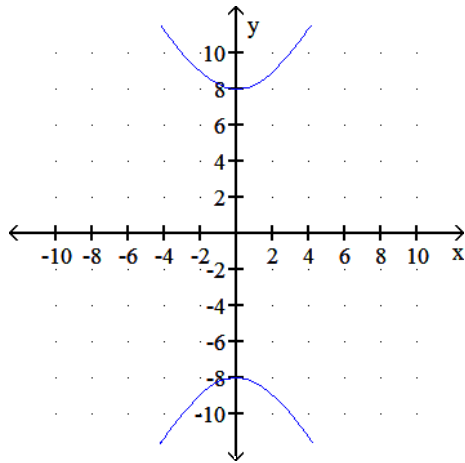
B) $\frac{x^2}{64} + \frac{y^2}{100} = 1$

Graph the hyperbola. Identify the center, vertices, foci, transverse axis, equations of asymptotes:

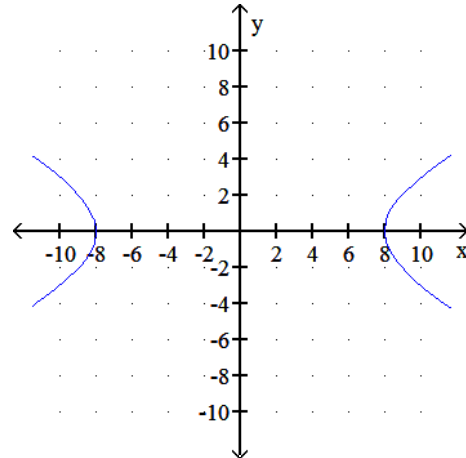
4) $\frac{x^2}{64} - \frac{y^2}{16} = 1$

4) _____

A) center: (0, 0);
vertices: (0, -8), (0, 8)



B) center: (0, 0);
vertices: (-8, 0), (8, 0)
foci: $(4\sqrt{5}, 0), (-4\sqrt{5}, 0)$, x-axis;
 $y = 1/2x, y = -1/2x$

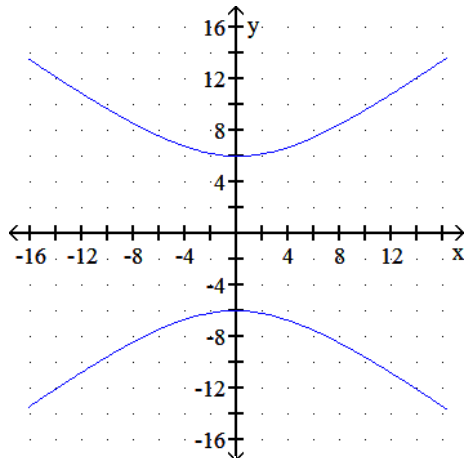


Graph the hyperbola. Identify the foci and write the equations for the asymptotes.

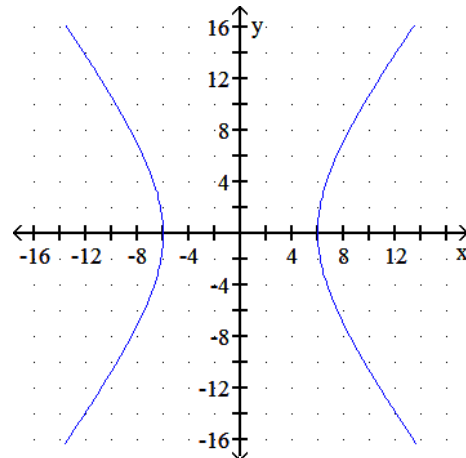
5) $\frac{y^2}{36} - \frac{x^2}{64} = 1$

5) _____

A) foci: (0, -10), (0,10);
asymptotes: $y = -\frac{3}{4}x, y = \frac{3}{4}x$



B) foci: (0, -6), (0,6);
asymptotes: $y = -\frac{4}{3}x, y = \frac{4}{3}x$



A model of the form $x^2 = 4py$ is given. Identify the focus, and write an equation for the directrix.

6) $x^2 = 36y$

A) focus: (-9, 0); directrix: $y = 9$

C) focus: (0, 9); directrix: $y = -9$

B) focus: (0, -9); directrix: $y = 9$

D) focus: (9, 0); directrix: $y = -9$

6) _____

An equation of the form $y^2 = 4px$ is given. Identify the vertex, value of p , focus, focal diameter, and endpoints of the latus rectum.

7) $y^2 = 16x$

A) vertex: (0, 0); $p = 4$; focus: (4, 0); focal diameter: 16,
endpoints of latus rectum: (4, -8); (4, 8)

B) vertex: (0, 0); $p = 4$; focus: (0, 4); focal diameter: 16,
endpoints of latus rectum: (8, -4); (8, 4)

7) _____

An equation of the form $y^2 = 4px$ is given. Write equations for the directrix and axis of symmetry.

8) $y^2 = 14x$

A) directrix: $x = -\frac{7}{2}$; axis of symmetry: $y = 0$

B) directrix: $x = \frac{7}{2}$; axis of symmetry: $x = 0$

8) _____

Answer Key

Testname: Q&A_04

- 1) B
- 2) B
- 3) A
- 4) B
- 5) A
- 6) C
- 7) A
- 8) A