

LESSON
10-1**Practice C****Introduction to Conic Sections**

Graph each equation on a graphing calculator. Identify each conic section. Then describe the center and intercepts.

1. $100x^2 + 121y^2 = 12,100$

2. $x^2 + 49y^2 = 196$

3. $9x^2 + 36y^2 = 2916$

4. $578 - 2x^2 - 2y^2 = 0$

Graph each equation on a graphing calculator. Identify each conic section. Then describe the vertices and the direction that the graph opens.

5. $x + 9y^2 = 0$

6. $y = -2x^2 + 3$

7. $x^2 = y^2 + 25$

8. $x^2 = y^2 - 25$

9. $y^2 = x - 6$

10. $x^2 - 3y^2 = 36$

Find the center and radius of a circle that has a diameter with the given endpoints.

11. (14, 2) and (-8, -118)

12. (-40, 33) and (40, 15)

13. (0.5, -1) and (42.5, -7.5)

Solve.

14. The orbit of an asteroid is modeled by the equation $64x^2 + 4y^2 = 256$.

a. Identify the conic section. _____

b. Identify the x- and y-intercepts of the orbit.

c. Suppose each unit of the coordinate plane represents 60 million miles. What is the maximum width of the asteroid's orbit?
