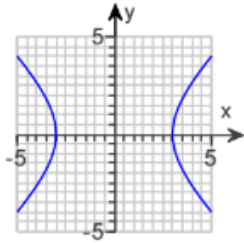


1. Graph the equation. Find the lines of symmetry, the domain, and the range.

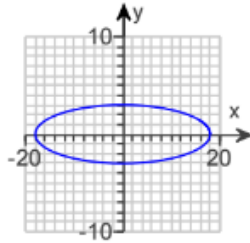
$$x^2 + 36y^2 = 324$$

Choose the correct graph. Circle your choice.

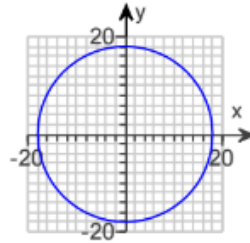
A.



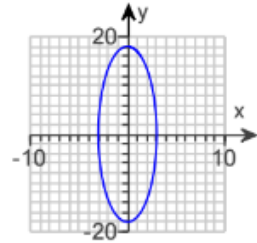
B.



C.



D.



What are the lines of symmetry of the conic section? Circle your choice.

- A. The x-axis and the y-axis
- B. Any line that passes through the center of the conic section
- C. Any line that passes through two points of the conic section
- D. The line $y = x$ and the line $y = -x$

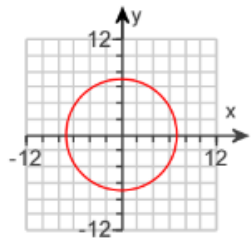
The domain is _____.

The range is _____.

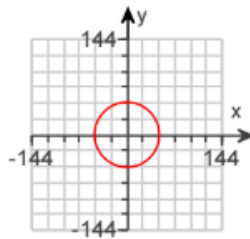
2. Graph the equation. Identify the conic section and describe the graph and its lines of symmetry. Find the domain and range. $x^2 + y^2 = 49$

Choose the correct graph. Circle your choice.

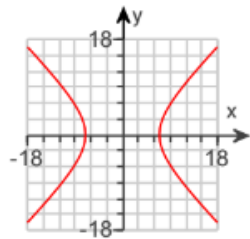
A.



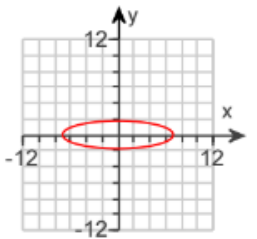
B.



C.



D.



Describe the graph. If it is a circle, state the radius.

The graph is a(n) _____. The center is at _____.

Describe all of the lines of symmetry of the conic section. Circle your answer.

- A. The line $y = x$ and the line $y = -x$
- B. Every line that passes through at least two points of the conic section
- C. Every line that passes through the center of the conic section
- D. The x-axis and the y-axis

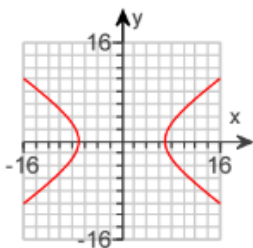
The domain is _____.

The range is _____.

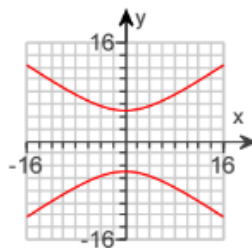
3. Graph the equation. Identify the conic section and describe the graph and its lines of symmetry. Then find the domain and range. $x^2 - 2y^2 = 49$

Choose the correct graph. Circle your choice.

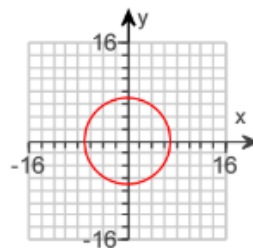
A.



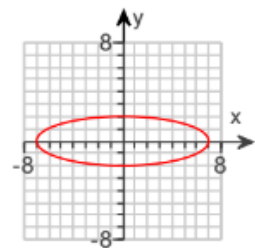
B.



C.



D.



Describe the graph. If it is a circle, state the radius.

The graph is a(n) _____. The center is at _____.

Describe all of the lines of symmetry of the conic section. Circle your answer.

- A. Every line that passes through at least two points of the conic section
- B. The x-axis and the y-axis
- C. Every line that passes through the center of the conic section
- D. The line $y = x$ and the line $y = -x$

The domain is _____.

The range is _____.

4. Write an equation of a parabola with vertex at the origin and the focus at (10, 0).

5. Write an equation of a parabola with vertex at the origin and a directrix of $y = 1.2$.

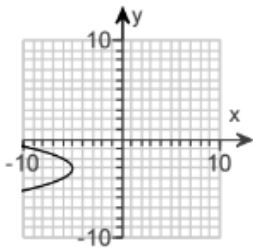
6. Identify the vertex, the focus, and the directrix of the parabola with the given equation. Then sketch the graph.

$$y = x^2 + 6x + 14$$

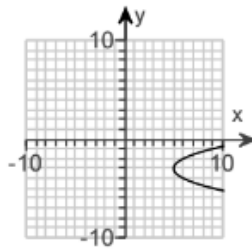
The vertex is _____. The focus is _____. The directrix is $y =$ _____.

Choose the correct graph. Circle your choice.

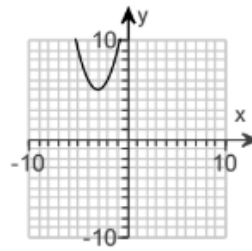
A.



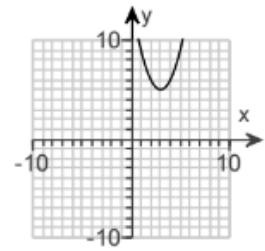
B.



C.



D.



7. Write an equation of a parabola with a vertex of $(-4, -3)$ and focus $(-4, -2)$.

8. Write an equation of a circle with a center $(-1, -7)$ and radius of 5.

9. Determine the center and radius of the circle described by the equation.

$$(x + 2)^2 + (y - 4)^2 = 36$$

Center _____

Radius _____

10. Graph the circle. $(x - 5)^2 + (y + 2)^2 = 25$

