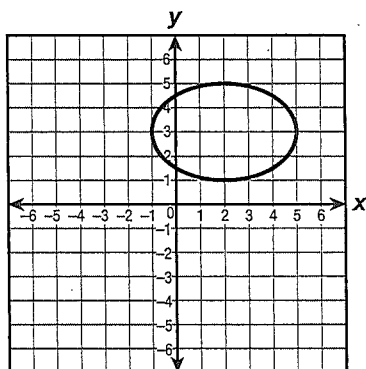


Chapter 5 Review

1 The graph of an ellipse is shown below.



What is the equation of the ellipse?

A $\frac{(x - 2)^2}{9} + \frac{(y - 3)^2}{4} = 1$

B $\frac{(x - 2)^2}{4} + \frac{(y - 3)^2}{9} = 1$

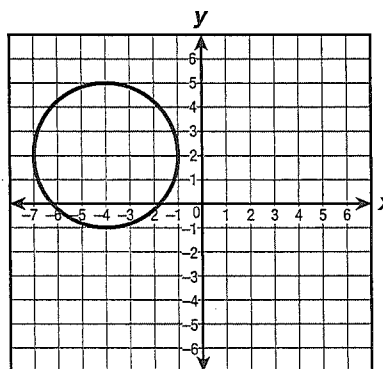
C $\frac{(x - 2)^2}{36} + \frac{(y - 3)^2}{16} = 1$

D $\frac{(x + 2)^2}{9} + \frac{(y + 3)^2}{4} = 1$

2 A plane slices through a cone parallel to the cone's base. Which type of conic section is formed?

- A Circle
- B Ellipse
- C Parabola
- D Hyperbola

3 The graph of a circle is shown below.



If the line $y = m$ is a line of symmetry for the circle, what is the value of m ?

Record your answer and fill in the bubbles below.

+	-	-	-	-	-	-	-	-
-	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1
	2	2	2	2	2	2	2	2
	3	3	3	3	3	3	3	3
	4	4	4	4	4	4	4	4
	5	5	5	5	5	5	5	5
	6	6	6	6	6	6	6	6
	7	7	7	7	7	7	7	7
	8	8	8	8	8	8	8	8
	9	9	9	9	9	9	9	9

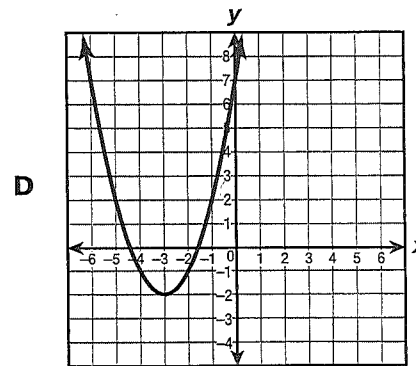
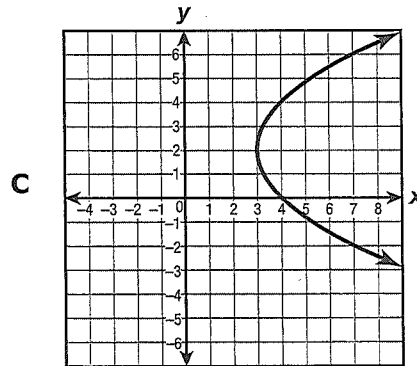
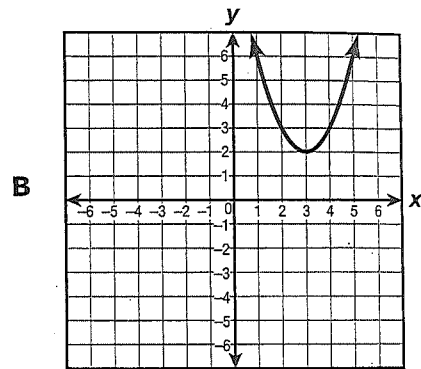
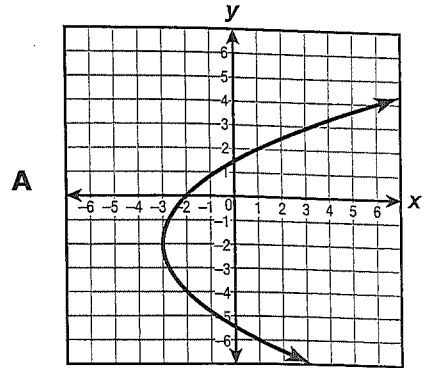
4 Which figure best describes the graph of $3x + 4y - 6y^2 + 90 = 0$?

- A Circle
- B Ellipse
- C Parabola
- D Hyperbola

5 Which of the following equations shows the standard form of $25x^2 - 4y^2 - 50x - 16y = 91$?

- A $\frac{(x - 1)^2}{25} + \frac{(y + 2)^2}{4} = 1$
- B $\frac{(x - 1)^2}{25} - \frac{(y + 2)^2}{4} = 1$
- C $\frac{(x - 1)^2}{4} + \frac{(y + 2)^2}{25} = 1$
- D $\frac{(x - 1)^2}{4} - \frac{(y + 2)^2}{25} = 1$

6 Which grid shows the graph of $(y + 2)^2 = 4(x + 3)$?



7 A plane slices through a cone parallel to the cone's slant height. Which type of conic section is formed?

- A Circle
- B Ellipse
- C Parabola
- D Hyperbola

8 Which figure best describes the graph of $90x^2 + 90y^2 - 72x - 10y + 32 = 0$?

- A Circle
- B Ellipse
- C Parabola
- D Hyperbola

9 Connie wants to rewrite the equation $y^2 - 8y = 5x - 6$ in the standard form for a parabola. She is using the method of completing the square. What constant must she add to both sides of the equation?

Record your answer and fill in the bubbles below.

+	0	1	2	3	4	5	6
-	0	1	2	3	4	5	6
	1	1	1	1	1	1	1
	2	2	2	2	2	2	2
	3	3	3	3	3	3	3
	4	4	4	4	4	4	4
	5	5	5	5	5	5	5
	6	6	6	6	6	6	6
	7	7	7	7	7	7	7
	8	8	8	8	8	8	8
	9	9	9	9	9	9	9

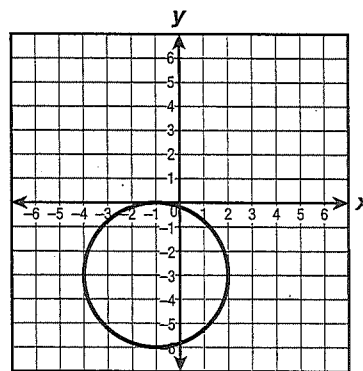
- 10 Which is a line of symmetry for an ellipse with the equation

$$\frac{(x - 9)^2}{100} + \frac{(y + 4)^2}{25} = 1?$$

- A $x = 4$
 B $x = -4$
 C $x = 9$
 D $x = -9$
- 11 Which figure best describes the graph of $12x^2 - 16y^2 + 2x - 10y + 31 = 0$?

- A Circle
 B Ellipse
 C Parabola
 D Hyperbola

- 12 The graph of a circle is shown below.



What is the equation of the circle?

- A $(x + 1)^2 + (y + 3)^2 = 3$
 B $(x + 1)^2 + (y + 3)^2 = 9$
 C $(x - 1)^2 + (y - 3)^2 = 3$
 D $(x - 1)^2 + (y - 3)^2 = 9$

13 The equation $x^2 + y^2 + 4x + 10y + 20 = 0$ describes a conic section.

A. What type of conic section best describes the graph of the equation?

B. Complete the square to write the equation in standard form.

C. Sketch the graph on the grid below.

