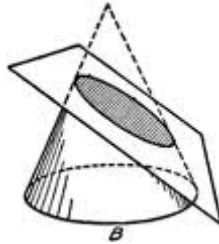




## Conic Sections

Evaluate

- 1 If a cone is sliced by a plane, as shown in the figure below, which conic section will be formed?



- A Parabola  
B Circle  
C Hyperbola  
D Ellipse

- 
- 2 What is the equation of a circle, with center  $(2, 3)$ , through the point  $(5, -1)$ ?

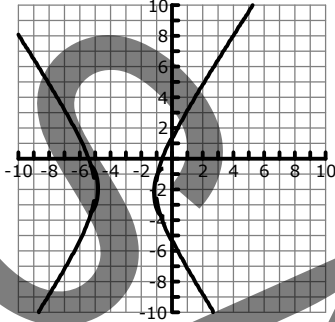
- A  $(x - 2)^2 + (y - 3)^2 = 25$   
B  $(x - 5)^2 + (y + 1)^2 = -25$   
C  $(x + 3)^2 + (y + 4)^2 = 5$   
D  $(x - 3)^2 + (y - 2)^2 = 36$



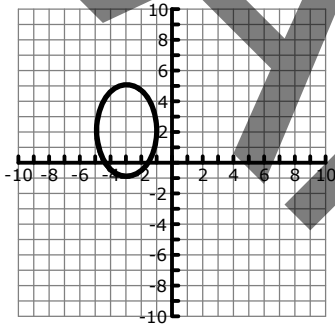
3 Which of the following sketches best represents the conic section given in this equation?

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

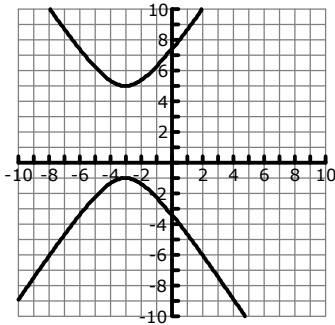
A



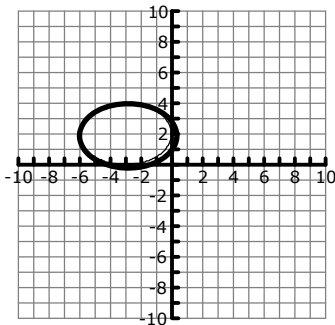
B



C



D



- 4 Which type of conic section is represented by the equation given below?

$$6x^2 - 6y^2 + 8x - 12y - 121 = 0$$

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

- 5 Complete the square as needed in order to put this conic section equation into standard form.

$$6x^2 - 9y + 12x - 17 = 0$$

- A  $(x + 1)^2 = 9(y + 3)$
- B  $(x + 1)^2 = \frac{3}{2}(y + 3)$
- C  $(x - 3)^2 = \frac{3}{2}(y + 27)$
- D  $(x + 2)^2 = \frac{2}{3}(y - 6)$

