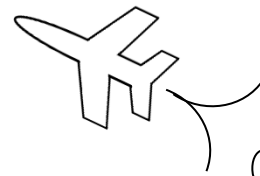




# Math on the Fly!

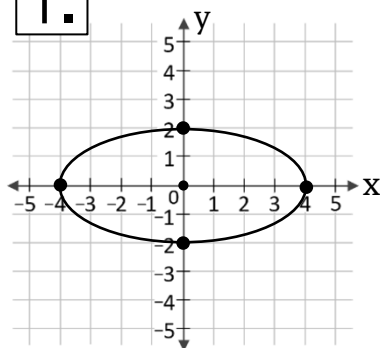


NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

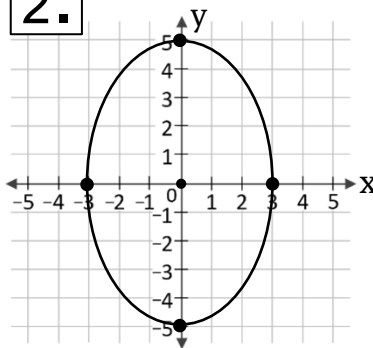
## Equations of Ellipses

Find the equation of each ellipse.

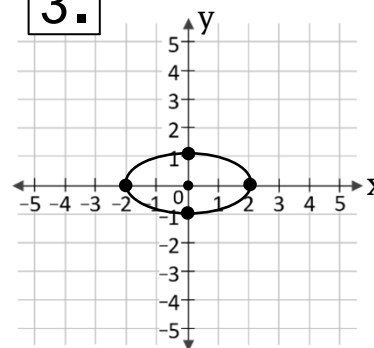
1.



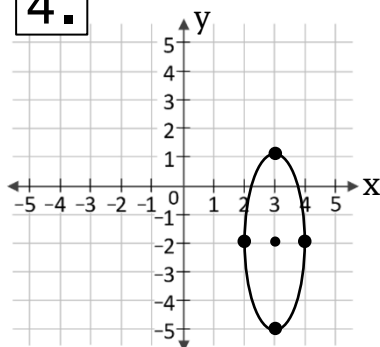
2.



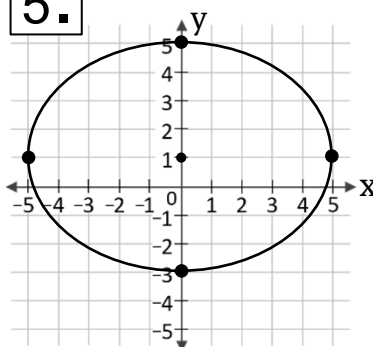
3.



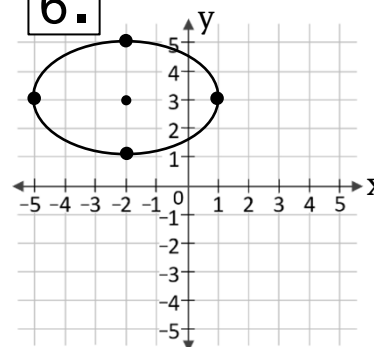
4.



5.



6.



Graph each ellipse.

Also provide the center and the lengths of the minor axis and major axis.

7.  $\frac{x^2}{16} + \frac{y^2}{9} = 1$

8.  $\frac{x^2}{4} + \frac{y^2}{25} = 1$

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

10.  $(x - 2)^2 + \frac{y^2}{16} = 1$

11.  $\frac{(x - 2)^2}{9} + \frac{(y + 1)^2}{16} = 1$

12.  $\frac{x^2}{25} + \frac{(y - 3)^2}{4} = 1$

## SOLUTIONS

1.  $\frac{x^2}{16} + \frac{y^2}{4} = 1$

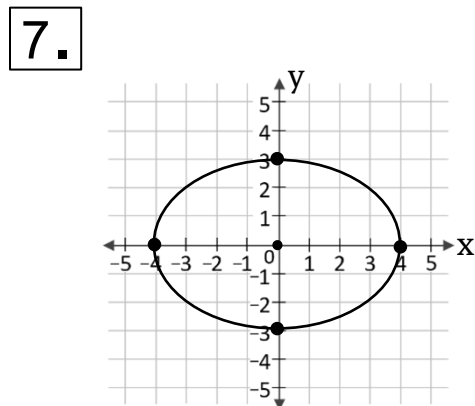
2.  $\frac{x^2}{9} + \frac{y^2}{25} = 1$

3.  $\frac{x^2}{4} + y^2 = 1$

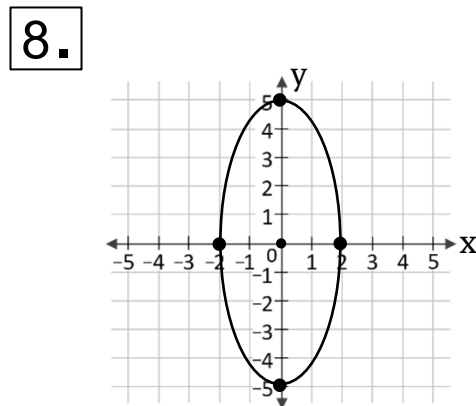
4.  $(x-3)^2 + \frac{(y+2)^2}{9} = 1$

5.  $\frac{x^2}{25} + \frac{(y-1)^2}{16} = 1$

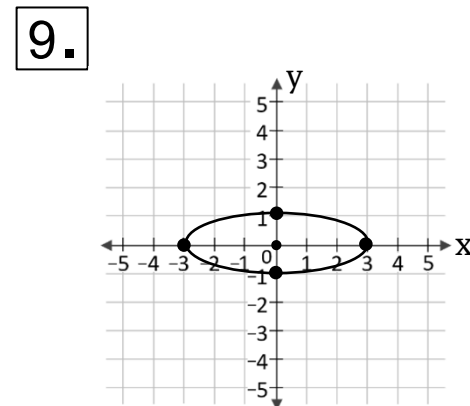
6.  $\frac{(x+2)^2}{9} + \frac{(y-3)^2}{4} = 1$



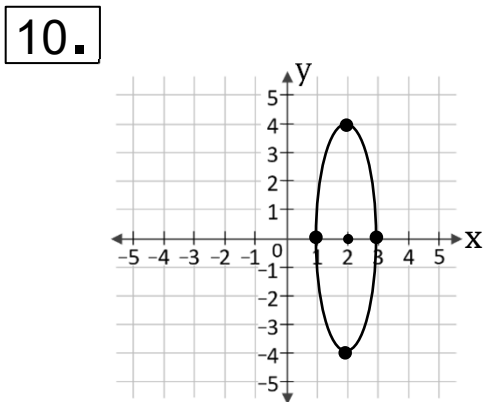
Center = (0,0)  
Minor Axis = 6  
Major Axis = 8



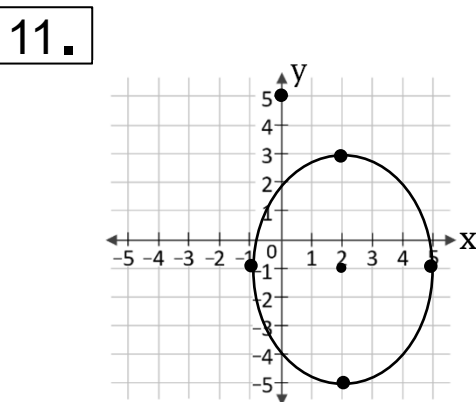
Center = (0,0)  
Minor Axis = 4  
Major Axis = 10



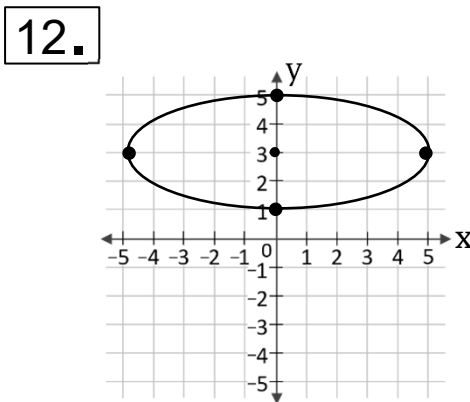
Center = (0,0)  
Minor Axis = 2  
Major Axis = 6



Center = (2,0)  
Minor Axis = 2  
Major Axis = 8



Center = (2,-1)  
Minor Axis = 6  
Major Axis = 8



Center = (0,3)  
Minor Axis = 4  
Major Axis = 10