

Chapter 9-3: Ellipses

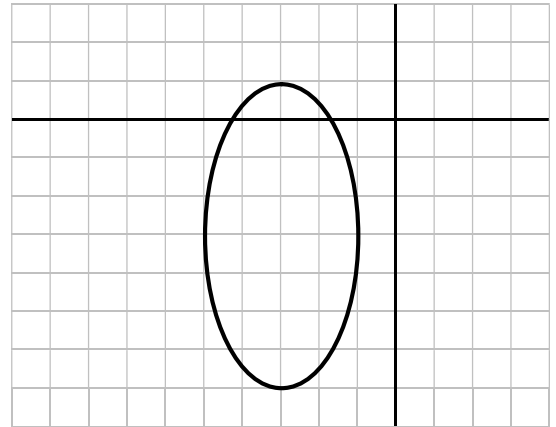
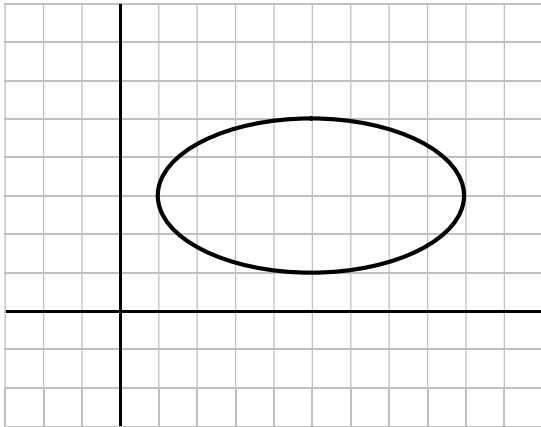
Graph each ellipse on graph paper

1. $\left(\frac{x-4}{5}\right)^2 + \left(\frac{y-1}{2}\right)^2 = 1$

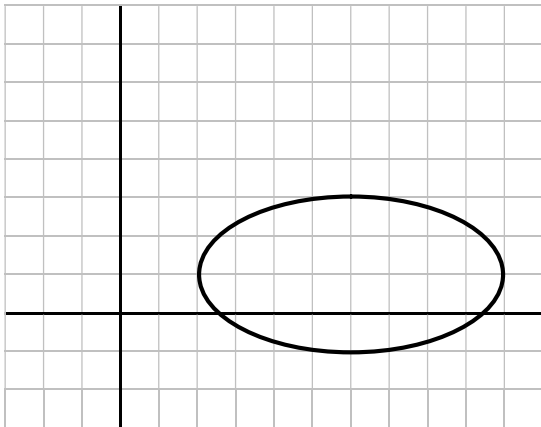
2. $\left(\frac{x+3}{2}\right)^2 + \left(\frac{y+2}{4}\right)^2 = 1$

Write the equation for each graph. Each square equals 1 unit.

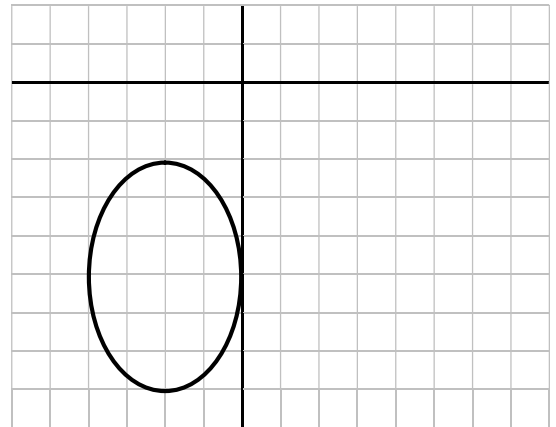
3.



4.



5.



Change each equation into standard form and **graph the ellipse**. List a (1/2 of major axis), b (1/2 of minor axis), and calculate c (focal radius). **Graph the focal points** on your graph. $c^2 = a^2 - b^2$

6. $x^2 + 4y^2 + 10x + 24y + 45 = 0$

7. $49x^2 + 16y^2 + 98x - 64y - 671 = 0$

8. $4x^2 + 9y^2 - 40x + 36y + 100 = 0$