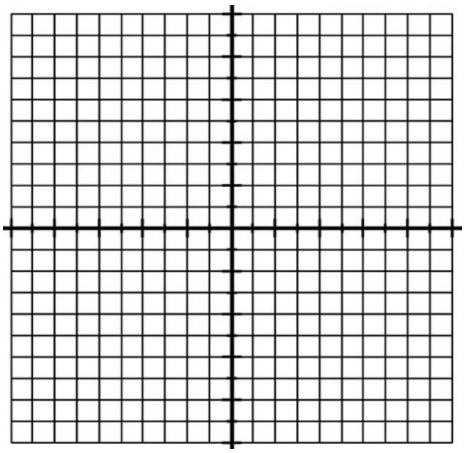
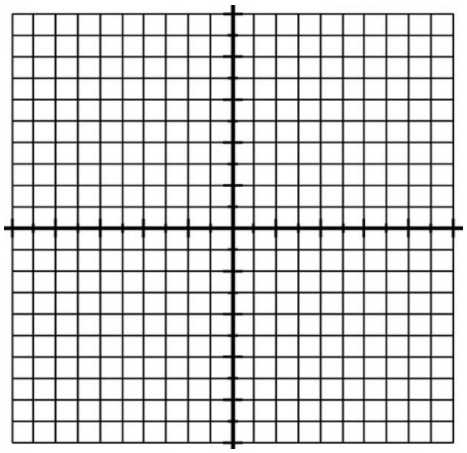
Review of Circle, Ellipse, Hyperbola and Parabola

Graph. Also find any foci (focus) and eccentricity (e).

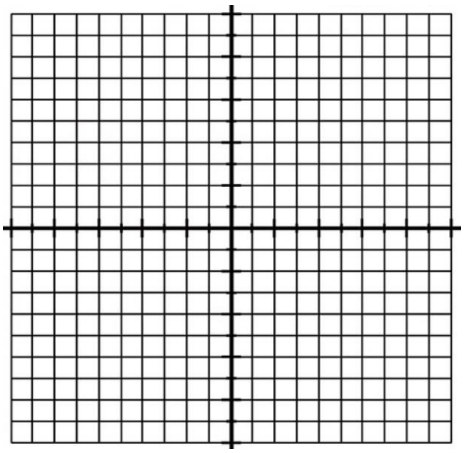
1. $\frac{x^2}{25}+\frac{(y-4)^2}{25}=1$



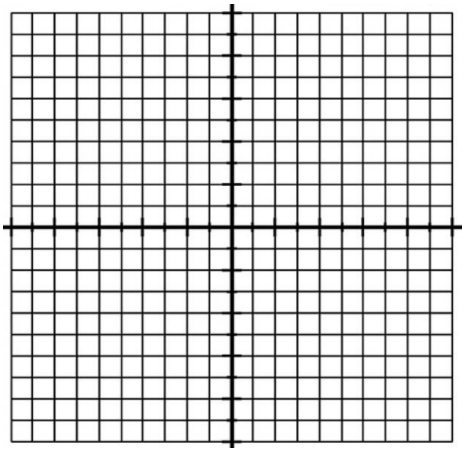
2. $\frac{(x-3)^2}{4}+\frac{(y+2)^2}{36}=1$



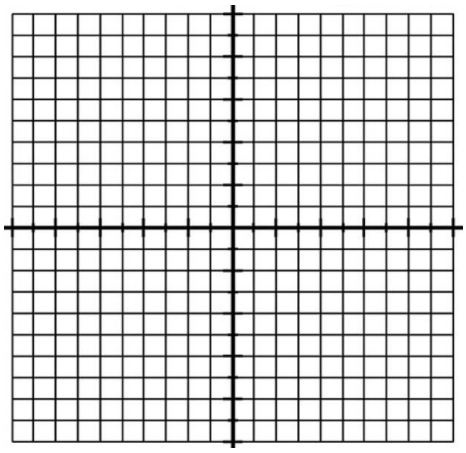
3. $x=\frac{1}{4}(y-1)^2-2$



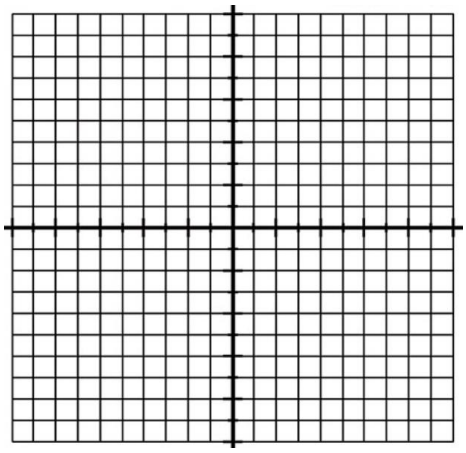
4. $\frac{(x-2)^2}{9}-\frac{(y-1)^2}{16}=1$



5. $y=2(x-3)^2$



6. $-\frac{(x+2)^2}{9}+\frac{(y+5)^2}{4}=1$



Write an equation satisfying the given conditions. Then write the parametric equation, too.

7. parabola focus $(1,\ 2\frac{3}{4})$ directrix $y = 1\frac{1}{4}$

8. Ellipse
endpoints of major axis (4, 3) and (-6, 3)
foci (-5, 3) and (3, 3)

9. hyperbola vertices (0, 3) and (0, -3)
conjugate axis of length 12

10. Circle center (-9, -12) and passes through (-4, -5)

11. ellipse
endpoints of major axis (2, 6) and (8, 6)
endpoints of minor axis (5, 4) and (5, 8)

12. Parabola vertex (1, 3) directrix $x = \frac{7}{8}$

13. circle
endpoints of diameter (-2, -9) and (0, -5)

14. Hyperbola vertices (-2, 1) and (-6, 1)
foci $(-4 + \sqrt{13}, 1)$ and $(-4 - \sqrt{13}, 1)$