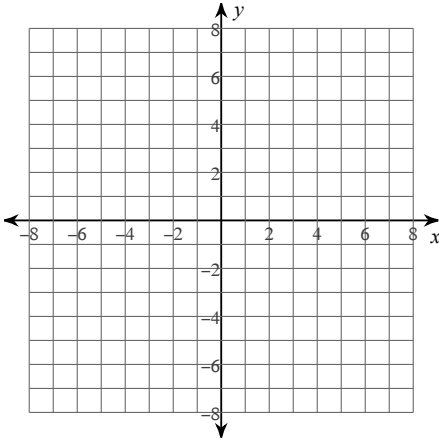


Practice with Ellipses

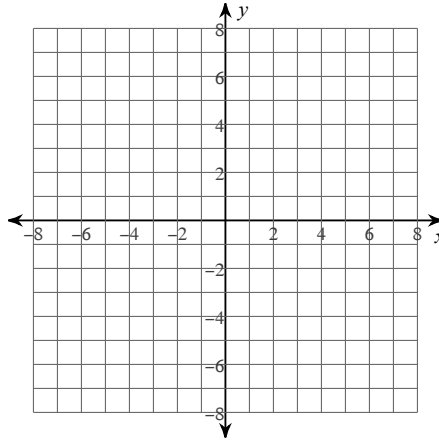
Name _____

Identify the center, vertices, and foci of each. Then sketch the graph.

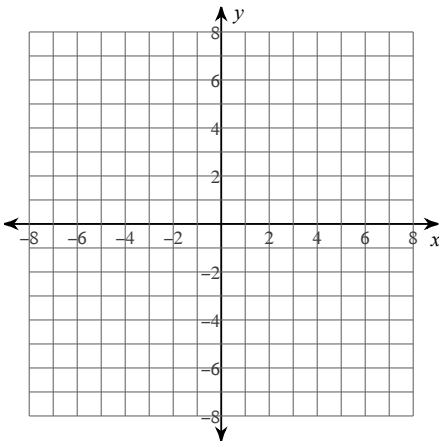
1) $\frac{x^2}{40} + \frac{(y-4)^2}{5} = 1$



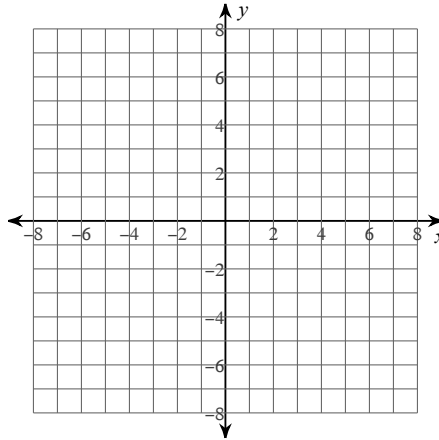
2) $\frac{(x-1)^2}{9} + \frac{y^2}{49} = 1$



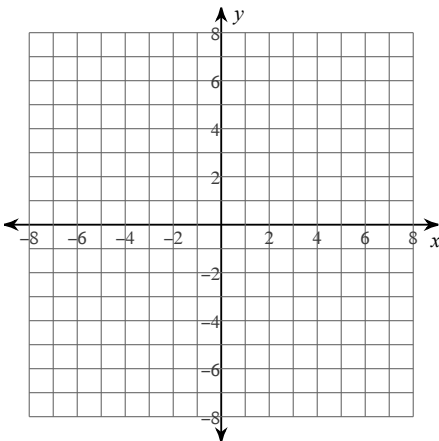
3) $\frac{x^2}{25} + \frac{\left(y - \frac{7}{2}\right)^2}{9} = 1$



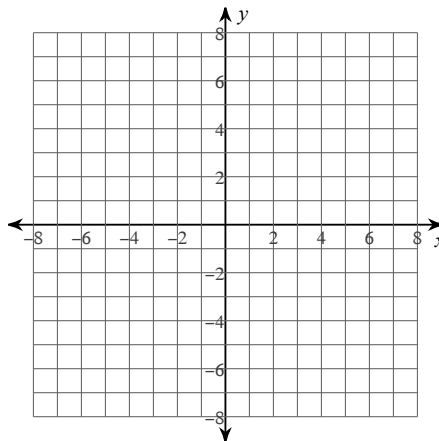
4) $\frac{(x+4)^2}{4} + \frac{y^2}{9} = 1$



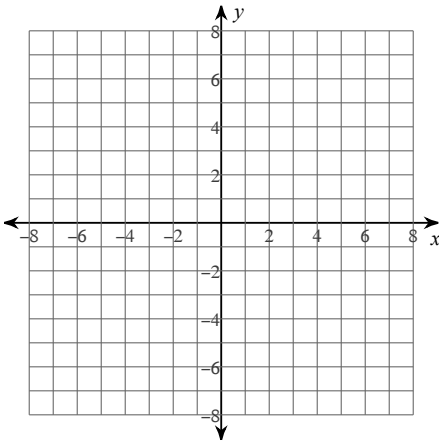
5) $36x^2 + 25y^2 - 144x - 756 = 0$



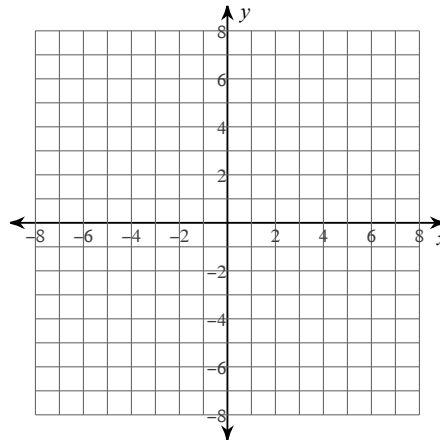
6) $9x^2 + 16y^2 - 54x + 64y + 1 = 0$



$$7) 4x^2 + 49y^2 - 294y + 245 = 0$$



$$8) x^2 + 25y^2 + 100y + 75 = 0$$



Use the information provided to write the standard form equation of each ellipse.

9) Vertices: $(8 + 6\sqrt{5}, -3), (8 - 6\sqrt{5}, -3)$
 Foci: $(8 + 3\sqrt{5}, -3), (8 - 3\sqrt{5}, -3)$

10) Vertices: $(1, -9), (-21, -9)$
 Foci: $(-10 + 2\sqrt{10}, -9), (-10 - 2\sqrt{10}, -9)$

11) Vertices: $(10, 3), (10, -23)$
 Foci: $(10, -10 + 4\sqrt{3}), (10, -10 - 4\sqrt{3})$

12) Vertices: $(-8 + \sqrt{170}, 8), (-8 - \sqrt{170}, 8)$
 Foci: $(-8 + \sqrt{145}, 8), (-8 - \sqrt{145}, 8)$