MATH 119: Some Practice Final Problems

Here are problems that cover the last two weeks of our class.

The final is cumulative; you should look at Practice Midterm 1+2 and Midterm 1+2 as well.

---

1. Answer the following:

   (a) Find a hyperbola with foci $(\pm 5, 0)$ and vertices $(\pm 3, 0)$, if possible.

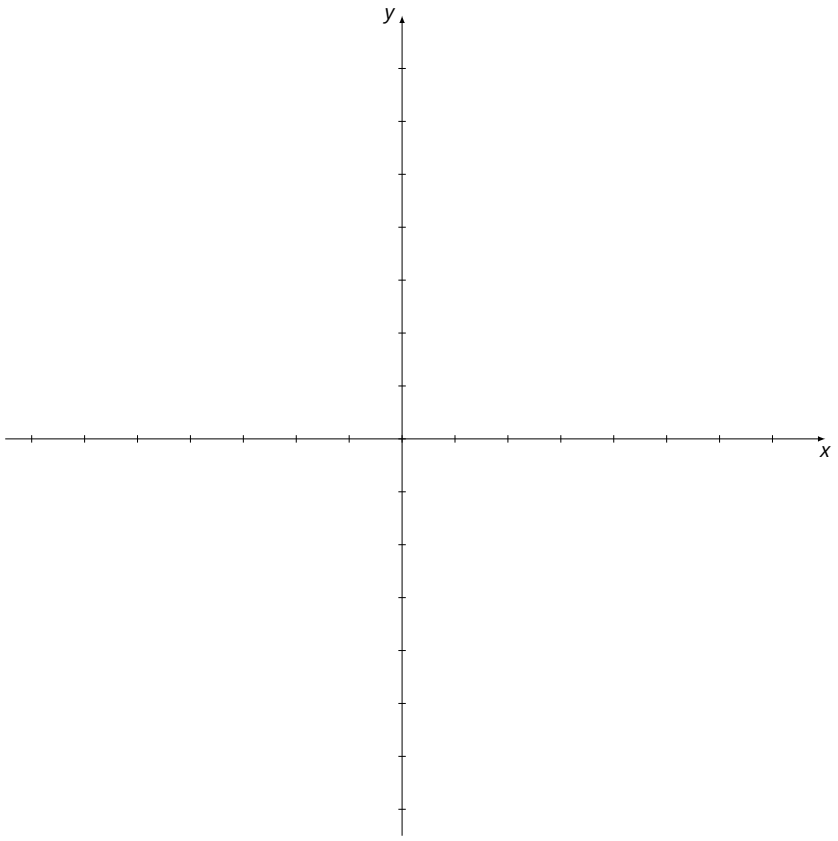
   (b) Find an ellipse with eccentricity 0.5 and vertices $(\pm 4, 0)$, if possible.

   (c) Find a parabola with directrix $y = -3$ and opens right, if possible.

2. Consider the hyperbola

$$4(y-1)^2-(x+1)^2=16$$

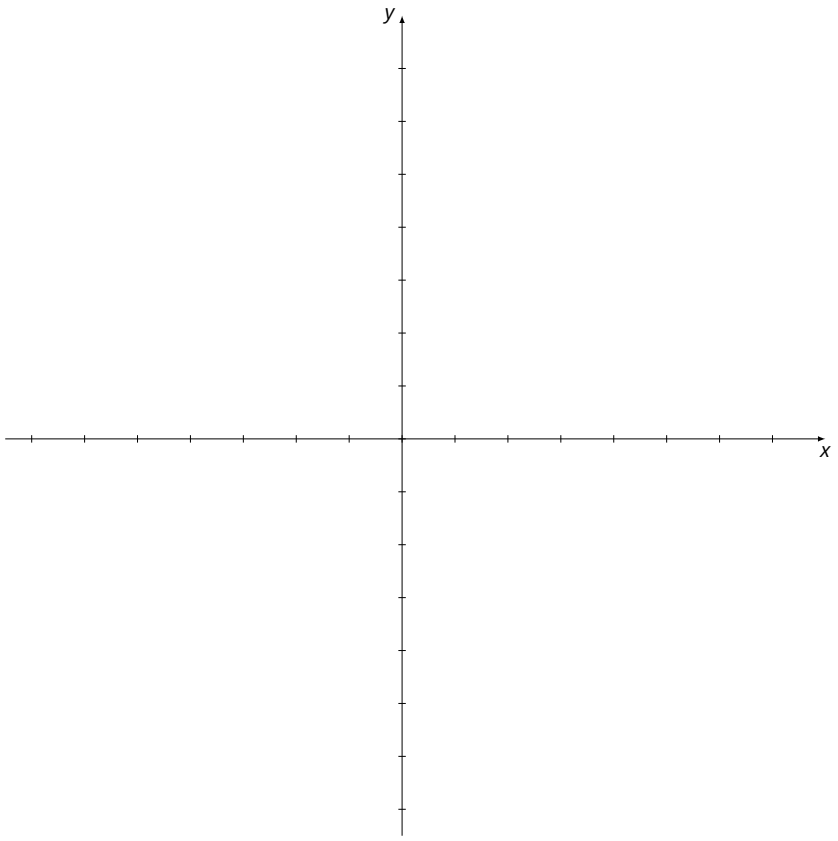
Find the foci, vertices, and sketch an accurate graph.



3. Consider the parabola

$$y^2 - 6y - 12x + 33 = 0$$

Find the foci and sketch an accurate graph.



4. Consider the ellipse

$$25(x-1)^2 + 9(y-2)^2 = 25 * 9$$

Find the foci, vertices and sketch an accurate graph.