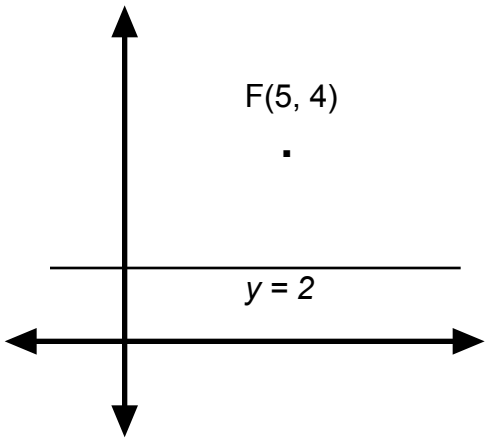
Honors Geometry **Conics - Review** **Name:**

1. Consider the graph at right which shows the focus and directrix of a parabola,



a) Sketch the parabola and find the coordinates of the vertex.

b) Show that the point P(1, 7) is equidistant from both the focus and the directrix.

c) Using the information above write an equation for the parabola determined by this focus and directrix.

2. A circle is drawn with center (19, -23) passing through the point (-7, -11).

a) Write an equation for this circle.

b) Does the point (20, -52) lie inside or outside this circle?

c) Find the value of the x-intercepts (nearest hundredth). (*Hint: x-intcpt --> y = 0).*

3. An ellipse has foci at (7, 8) and (7, -2), and vertices at (7, 11) and (7, -5).
Make a sketch and write an equation.

4. A hyperbola has foci at (-3, 9) and (-3, -5). The difference of the focal radii is 4.
Make a sketch and write an equation for the hyperbola.

5. Write an equation for the ellipse shown at right.
Include coordinates of foci.