Quiz 4A - Math 130

Name: _____

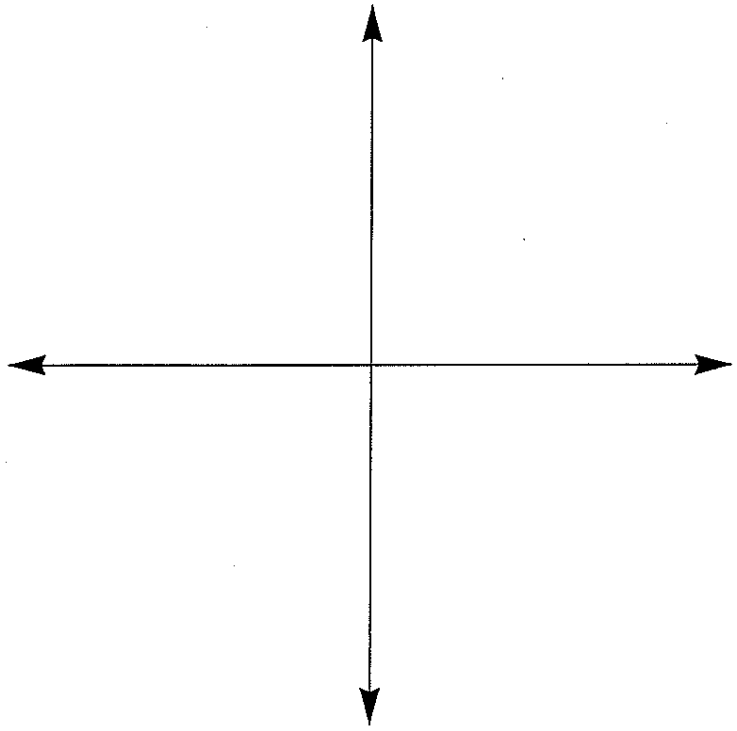
1. (2 points) A sound receiving dish used at outdoor spoting events is constructed in the shape of a paraboloid with its focus 5 inches from the vertex. Determine the width of the dish if the depth is to be 20 inches. Round to the nearest hundredth of an inch.

2. (2 points) Find the equation of the ellipse with vertices at (-3, 1) and (-3, -5) and a minor axis of length 2.

3. (4 points) Find the center, vertices, and foci of the hyperbola

$$4y^2 - x^2 + 40y - 4x + 60 = 0$$

Sketch the graph.



Center:_____
Vertices:_____
Foci:_____

4. (2 points) Identify the following conics as a parabola, circle, ellipse, or hyperbola. Use each term exactly once.

(a) $9x^2 - 36x = 4y^2$ _____

(b) $y^2 - 3 = 4(2x + y)$ _____

(c) $x^2 - 2x = -2y(y + 3) + 20$ _____

(d) $x^2 + 6x + y^2 - 4y = -6$_____