

**Math 152 Ch. 13 Test**

Write each equation in the standard form, write the name of the curve, and sketch the graph.

1.  $x = -y^2 - 4y + 6$

2.  $y^2 + 2x^2 = 4x + 6$

3.  $4x^2 + 4y^2 + 16x + 8y = 1$

4.  $36y^2 - 49x^2 = 1764$

5. Solve the system of the equations  $\begin{cases} x^2 + y^2 = 4 \\ x - y = 4 \end{cases}$

6. Find the length and the width of a room whose area is 150 square feet and whose perimeter is 50 feet.