Homework Set #9

Write your solutions on the answer sheets provided.

Write the standard form equation, give the critical information, and graph each of the following.

1. **Parabola**: Focus $(2, -3)$, Directrix $x = 5$

2. **Parabola**: $x^2 + 2x - y + 3 = 0$

3. **Circle**: Passing through $(7, -1)$, $(7, 5)$, and $(1, -1)$

4. **Circle**: $x^2 + y^2 - 4x + 6y - 12 = 0$

5. **Ellipse**: Foci $(1, -4)$ and $(5, -4)$, Major Axis Endpoints $(0, -4)$ and $(6, -4)$

6. **Ellipse**: $9x^2 + 16y^2 + 54x - 32y - 47 = 0$

7. **Hyperbola**: $\frac{9(x-3)^2}{4} - (y - 2)^2 = 1$

Write the standard form equation of the conic that satisfies the given information.

8. Conic with center $(4, -2)$; $a = 3$, $c = 4$, transverse axis parallel to x-axis

9. **Ellipse**: Foci $(2, 3)$ and $(-2, 3)$, one vertex $(4, 3)$
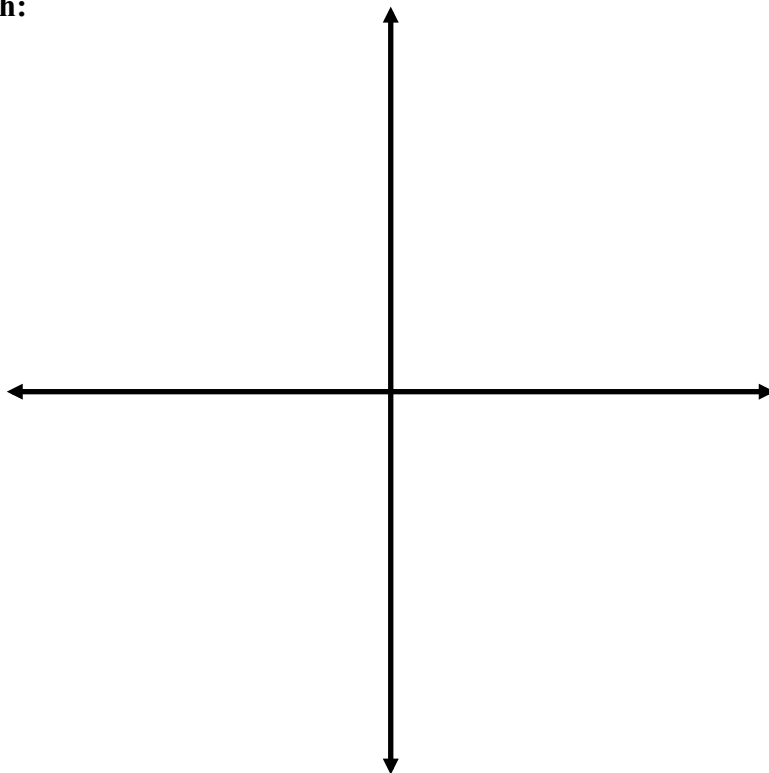
10. Conic with focus $(3, 6)$, directrix $y = 8$

Homework Set #9 – ANSWER SHEET

Name _____

1. **Standard Equation:**   **Graph:**
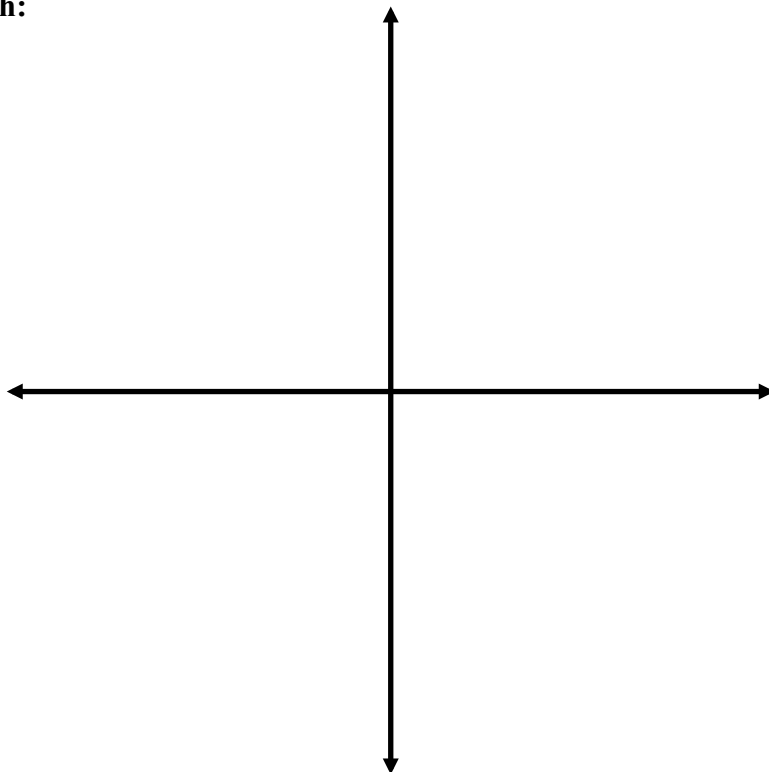

   Critical Information:

2. **Standard Equation:**   **Graph:**

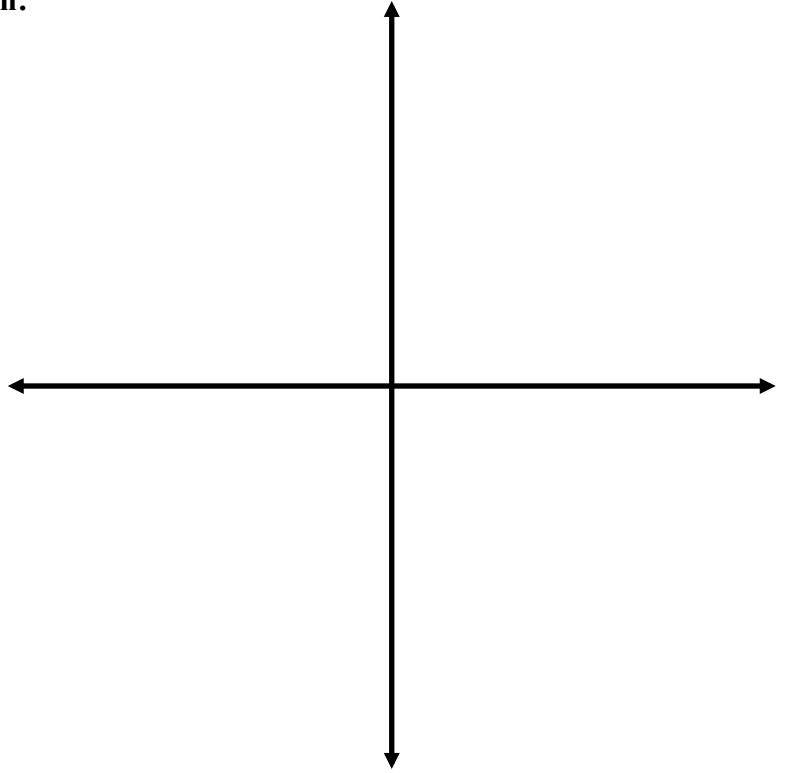   **Critical Information:**

3. **Standard Equation:**   **Graph:**

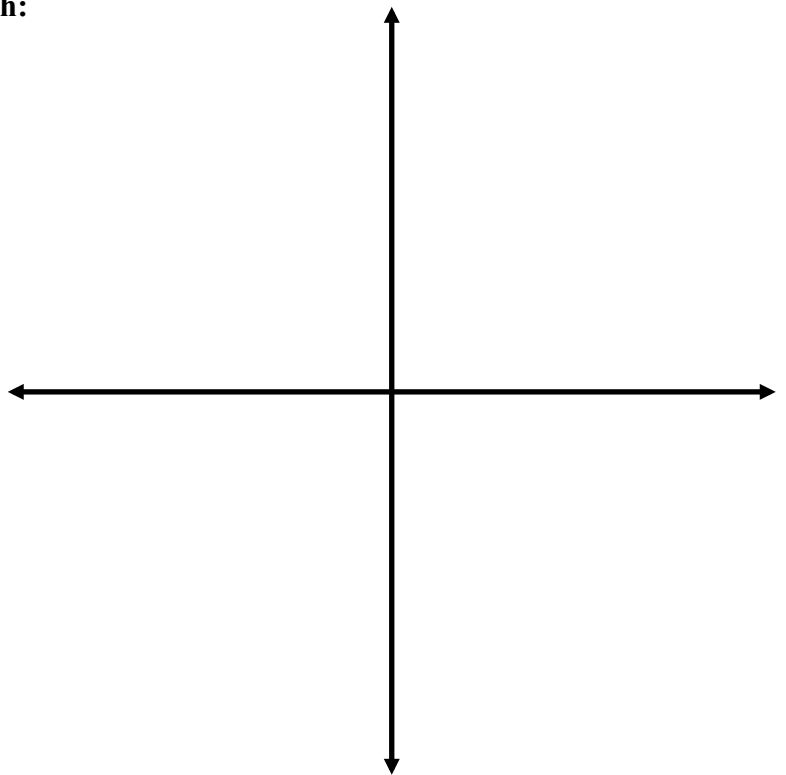

   Critical Information:

4. **Standard Equation:**   **Graph:**
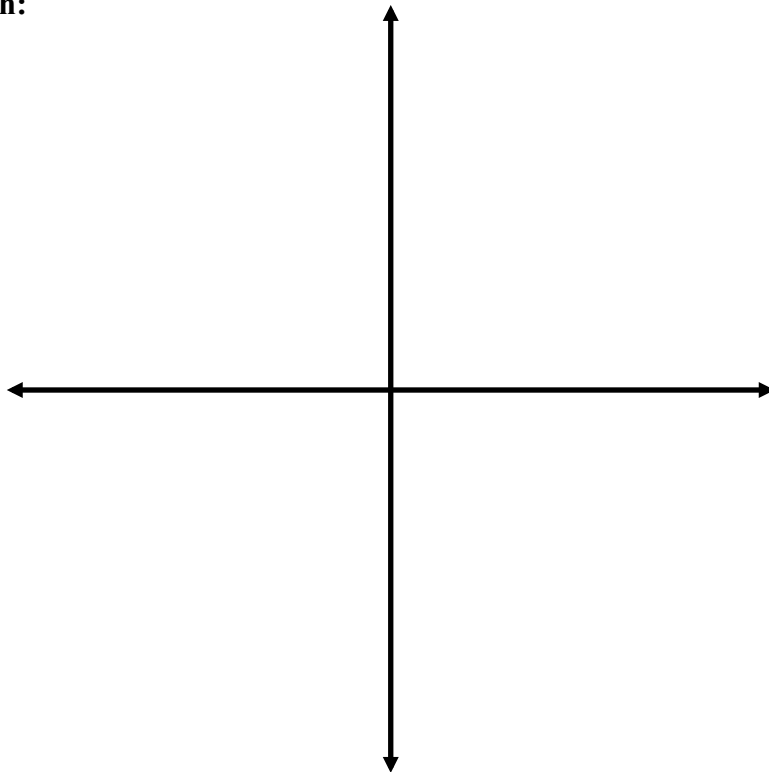

   Critical Information:

5. **Standard Equation:**   **Graph:**
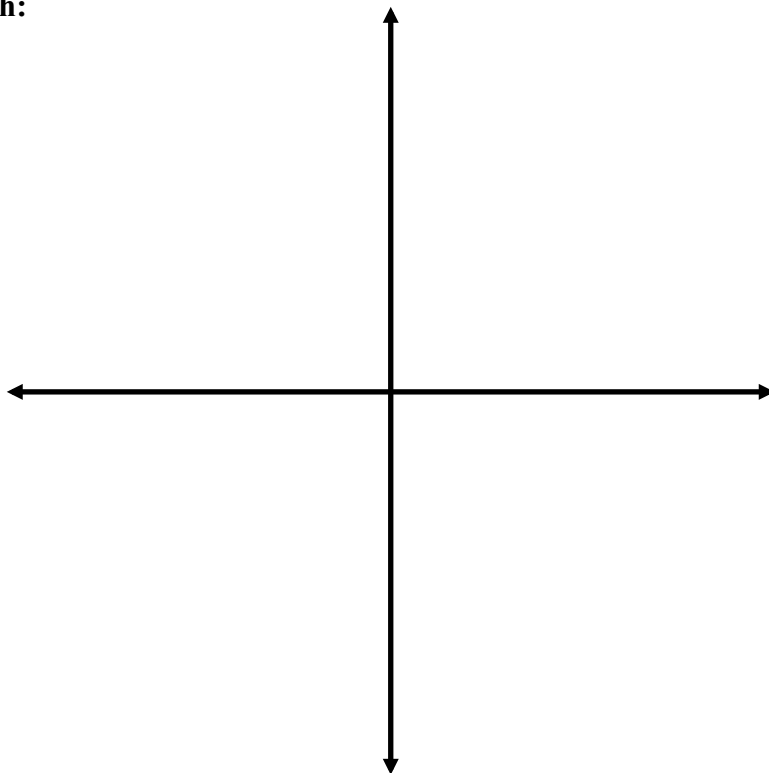
   Critical Information:
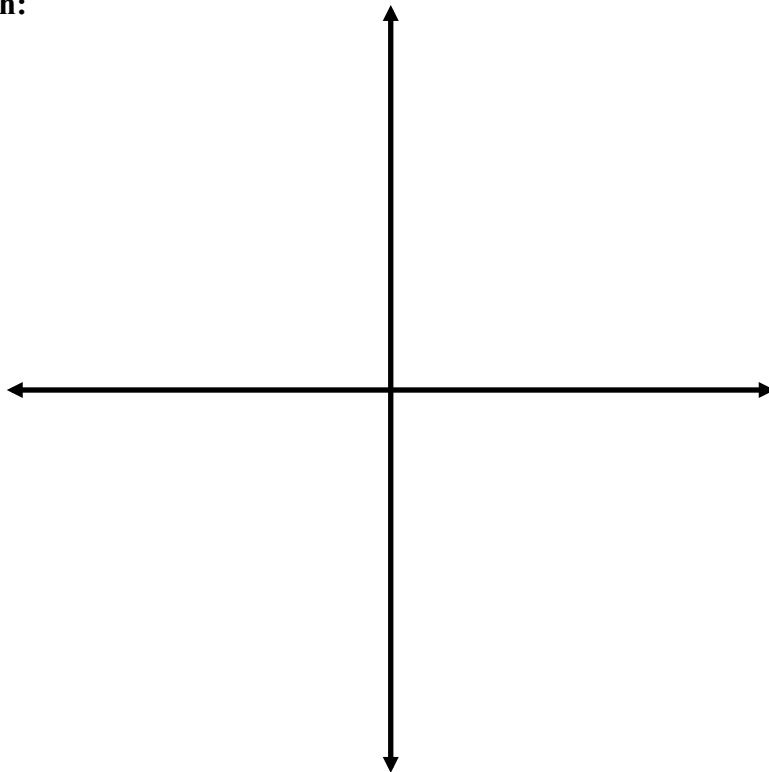
6. **Standard Equation:**   **Graph:**

   Critical Information:

7. **Standard Equation:**   **Graph:**

   Critical Information:

8. Standard Equation: _____

9. Standard Equation: _____

10. Standard Equation: _____