Algebra 2 Name_____ Date_____

8.2 Parabola Practice Worksheet

Given: $y = 2x^2 - 12x + 12$ **FIND:**

1. Equation in standard form _____
2. Vertex _____
3. Direction of opening _____
4. Draw a rough sketch
5. Axis of symmetry _____
6. Magic distance _____
7. Focus _____
8. Directrix _____
9. Length of LR _____
10. Graph it on graph paper

Given: $x=-\frac{1}{8}y^2-\frac{1}{2}y+\frac{5}{2}$ **FIND:**

1. Equation in standard form _____

2. Vertex _____

3. Direction of opening _____

4. Draw a rough sketch

5. Axis of symmetry _____

6. Magic distance _____

7. Focus _____

8. Directrix _____

9. Length of LR _____

10. Graph it on graph paper

Given: focus (1, -3); directrix $x = \frac{1}{2}$; Write the equation of the parabola

Steps:

1. Draw a rough sketch of graph

2. Find the vertex _____

3. Calculate the magic distance _____

4. Solve for ***a*** _____

5. Write the equation of the parabola _____

6. Draw the graph on graph paper

Given: vertex (5, 3); focus $\left(5, 3\frac{1}{6}\right)$; Write the equation of the parabola

Steps:

1. Draw a rough sketch of graph

2. Calculate the magic distance _____

3. Solve for ***a*** _____

4. Write the equation of the parabola _____

5. Draw the graph on graph paper