

Topic 7.2
Parabolas
Homework

Name: _____

Date: _____

Write each equation in the form $y = a(x-h)^2 + k$.

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

2. $y = 5x^2 + 30x - 8$

3. $y = 2x^2 - 16x + 7$

For the following problems:

a) Name the coordinates of the vertex and focus

b) Name the equation of the axis of symmetry

c) Name the equation of the directrix

d) Determine the direction the parabola opens

e) Find the length of the latus rectum.

4) $y = 2x^2$

5) $y = x^2 + 4x - 2$

6) $y = -3x^2 + 18x - 4$

7) $x = 4y^2 + 2y + 8$