

NAME:\_\_\_\_\_

1. Write the equation of a parabola whose axis of symmetry is  $x = -1$ .  
Write the equation in vertex form.
2. Explain how finding the equation of the axis of symmetry for a parabola written in vertex form is different from finding the equation of the line of symmetry for a parabola written in standard form.

[1] Answers may vary. Sample:  $y = (x + 1)^2 + 2$

For a parabola written in vertex form,  $y = a(x - h)^2 + k$ , the equation of the axis of symmetry is  $x = h$ .

For a parabola written in standard form,  $y = ax^2 + bx + c$ , the equation of the axis of symmetry is

[2]  $x = -\frac{b}{2a}$ . It is easier to find the equation when the parabola is written in vertex form.