

11.1 Corrective Assignment #2 – Parabolas

Name: _____

In exercises 1-3, sketch the graph of the given equation and fill in the blanks for the given information.

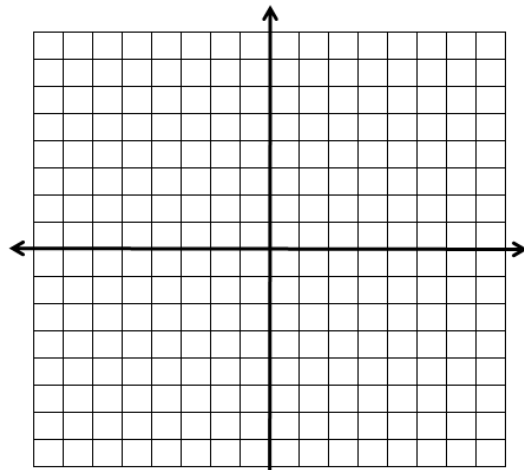
1. $(x - 1)^2 = y + 3$ Coordinate of vertex:

Direction it opens:

Axis of symmetry:

Coordinate of focus:

Equation for directrix:



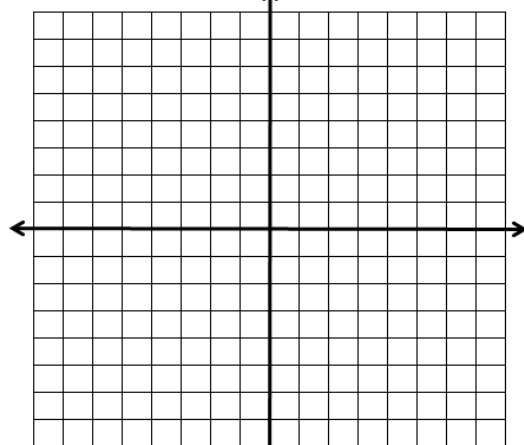
2. $(y - 5)^2 = -4(x + 2)$ Coordinate of vertex:

Direction it opens:

Axis of symmetry:

Coordinate of focus:

Equation for directrix:



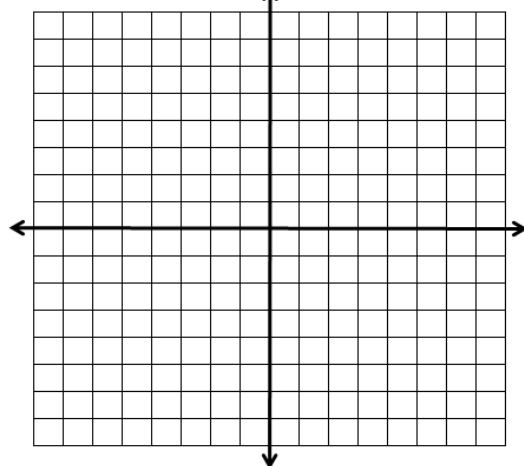
3. $(x + 1)^2 = 8(y + 4)$ Coordinate of vertex:

Direction it opens:

Axis of symmetry:

Coordinate of focus:

Equation for directrix:



In exercises 4-11, find an equation for the parabola that satisfies the given condition. Use transformational form (just like the notes, the quantity squared will be isolated).

4. Vertex $(0, 0)$, focus $(0, \frac{1}{8})$

5. Vertex $(2, 4)$, focus $(-2, 4)$

6. Vertex $(-10, 1)$, focus $(-10, 2)$

7. Vertex $(-7, 2)$, directrix $y = 4$

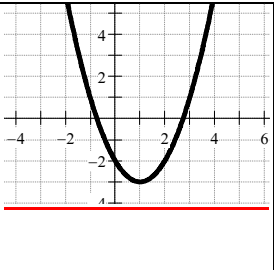
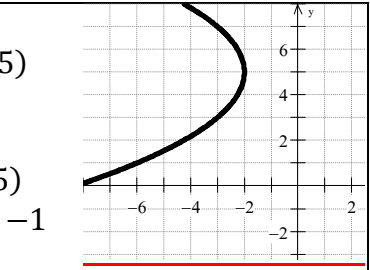
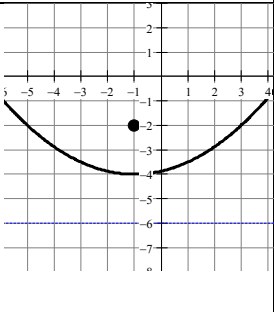
8. Vertex $(1, 4)$, directrix $x = -5$

9. Focus: $(-5, 7)$, Directrix: $x = 3$

10. Focus: $(-4, 9)$, Directrix: $x = 7$

11. Focus $(5, 11)$, directrix $y = 7$

11.1 CA2 - ANSWERS

<p>1. Coordinate of vertex: $(1, -3)$ Direction it opens: up Axis of symmetry: $x = 1$ Coordinate of focus: $(1, -\frac{11}{4})$ Equation for directrix: $y = -\frac{13}{4}$</p>		<p>2. Coordinate of vertex: $(-2, 5)$ Direction it opens: left Axis of symmetry: $y = 5$ Coordinate of focus: $(-3, 5)$ Equation for directrix: $x = -1$</p>	
<p>3. Coordinate of vertex: $(-1, -4)$ Direction it opens: up Axis of symmetry: $x = -1$ Coordinate of focus: $(-1, -2)$ Equation for directrix: $y = -6$</p>		<p>4. $x^2 = \frac{1}{2}y$</p>	<p>5. $(y - 4)^2 = -16(x - 2)$</p>
		<p>6. $(x + 10)^2 = 4(y - 1)$</p>	<p>7. $(x + 7)^2 = -8(y - 2)$</p>
		<p>8. $(y - 4)^2 = 24(x - 1)$</p>	<p>9. $(y - 7)^2 = -16(x + 1)$</p>
		<p>10. $(y - 9)^2 = -22(x - \frac{3}{2})$</p>	<p>11. $(x - 5)^2 = 8(y - 9)$</p>