

11.1 Corrective Assignment – Parabolas

Name: _____

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

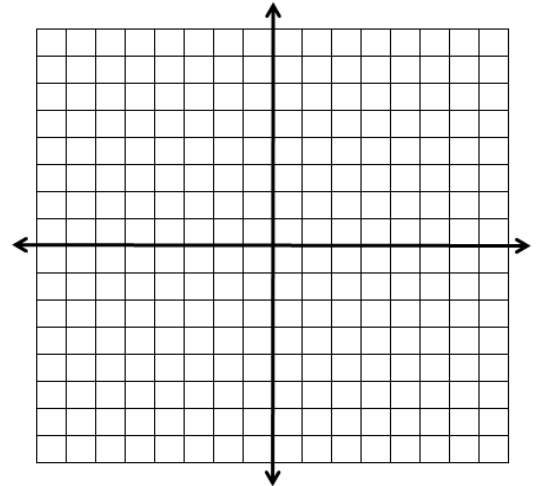
1. $(x + 1)^2 = -8(y - 4)$ Coordinate of vertex:

Direction it opens:

Axis of symmetry:

Coordinate of focus:

Equation for directrix:



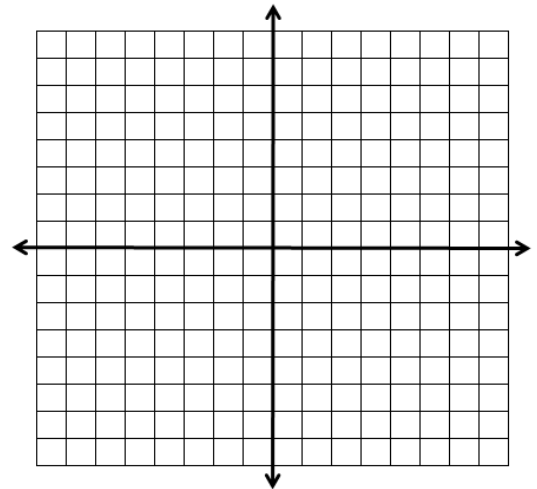
2. $(x - 2)^2 = -12(y - 5)$ Coordinate of vertex:

Direction it opens:

Axis of symmetry:

Coordinate of focus:

Equation for directrix:



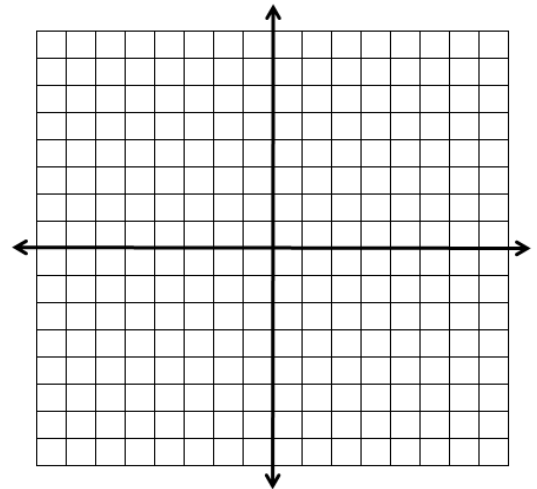
3. $(y + 2)^2 = -4(x - 2)$ Coordinate of vertex:

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: $(0, 10)$

5. Vertex: $(-1, 2)$, Focus: $(-1, 4)$

6. Vertex: $(-1, 0)$, Directrix: $y = \frac{1}{4}$

7. Vertex $(-3, -2)$, Directrix: $x = -10$

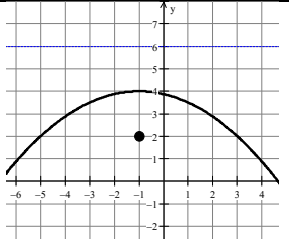
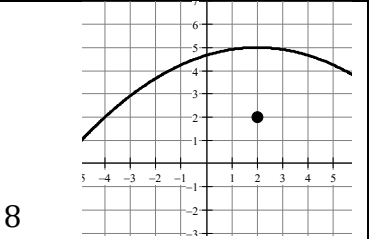
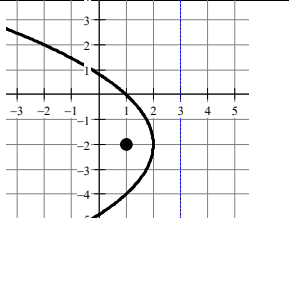
8. Focus: $(0, 6)$, Directrix: $x = \frac{1}{2}$

9. Focus: $(-3, 2)$, Directrix: $y = -4$

10. Focus: $(-3, 10)$, Directrix $y = 8$

11. Focus: $(4, 9)$, Directrix: $x = -8$

11.1 CA1 - ANSWERS

<p>1. Coordinate of vertex: $(-1, 4)$ Direction it opens: down Axis of symmetry: $x = -1$ Coordinate of focus: $(-1, 2)$ Equation for directrix: $y = 6$</p>		<p>2. Coordinate of vertex: $(2, 5)$ Direction it opens: down Axis of symmetry: $x = 2$ Coordinate of focus: $(2, 2)$ Equation for directrix: $y = 8$</p>	
<p>3. Coordinate of vertex: $(2, -2)$ Direction it opens: left Axis of symmetry: $y = -2$ Coordinate of focus: $(1, -2)$ Equation for directrix: $x = 3$</p>		<p>4. $x^2 = 40y$</p>	<p>5. $(x + 1)^2 = 8(y - 2)$</p>
		<p>6. $(x + 1)^2 = -y$</p>	<p>7. $(y + 2)^2 = 28(x + 3)$</p>
		<p>8. $(y - 6)^2 = -(x - \frac{1}{4})$</p>	<p>9. $(x + 3)^2 = 12(y + 1)$</p>
		<p>10. $(x + 3)^2 = 4(y - 9)$</p>	<p>11. $(y - 9)^2 = 24(x + 2)$</p>