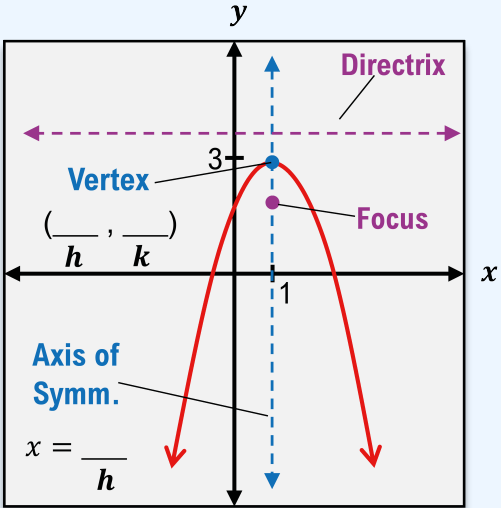
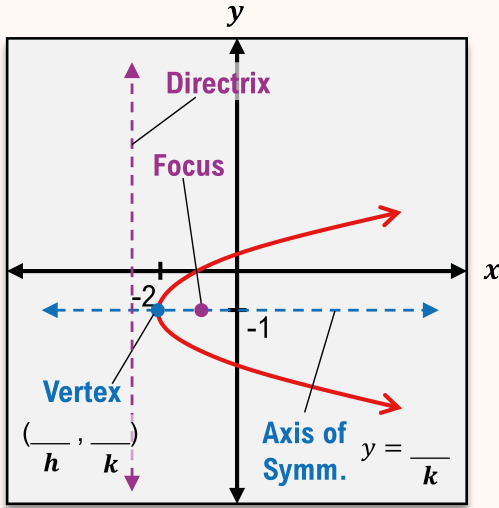


TOPIC: PARABOLAS

Parabolas in Standard Form

◆ Recall: A quadratic $y = a(x - h)^2 + k$ is a parabola that opens $__$ or $__$ w/ vertex (h, k) & axis of symm. $x = h$.

Recall	Vertical Parabolas	New	Horizontal Parabolas
	$y = a(x - h)^2 + k$ <p>a is pos: parabola opens [\uparrow \downarrow] a is neg: parabola opens [\uparrow \downarrow]</p> $y = -\frac{1}{2}(x - 1)^2 + 3$ 		$x = a(y - k)^2 + h$ <p>a is pos: parabola opens [\rightarrow \leftarrow] a is neg: parabola opens [\rightarrow \leftarrow]</p> $x = (y + 1)^2 - 2$ 

◆ As a conic section, a parabola is all points that are _____ distance from a fixed line (**directrix**) & point (**focus**).

TOPIC: PARABOLAS

PRACTICE

Find the vertex and axis of symmetry and determine the direction that the parabola opens.

(A) $x = 6y^2$

Parabola opens [↑ | ↓ | → | ←]

Vertex: (____, ____)

Axis of symmetry: _____

(B) $y = (x + 4)^2 - 9$

Parabola opens [↑ | ↓ | → | ←]

Vertex: (____, ____)

Axis of symmetry: _____

(C) $x = -2y^2 + 6$

Parabola opens [↑ | ↓ | → | ←]

Vertex: (____, ____)

Axis of symmetry: _____