

Advanced Precalculus
More with Parabolas

Name: _____

Generally speaking, a parabola with vertex at the origin:

Opening Up

Focal Point:

Directrix:

Equation:

Opening Right

Focal Point:

Directrix:

Equation:

“c” is: _____

[**EX 1**] Focus (0, 3)
 Directrix $y = -3$

[**EX 2**] Focus (0, 4)
 Directrix $y = -2$

[**EX 3**] Focus (-5, 4)
 Directrix $y = -2$

[**EX 4**] Focus (1, 4)
 Vertex (1, 2)

[**EX 5**] Focus (-1, 3)
 Vertex (-1, 0)

[**EX 6**] Focus (5, 1)
 Vertex (5, 4)

[**EX 7**] Focus (1, 4)
 Vertex (3, 4)

[**EX 8**] Focus (-1, 3)
 Vertex (0, 3)

[**EX 9**] Focus (5, 1)
 Vertex (3, 1)

Identify the vertex, focal point, and directrix of each parabola:

[EX 1] $y = \frac{(x+1)^2}{8}$

[EX 2] $y = 2(x-3)^2$

[EX 3] $y = \frac{(x+1)^2}{8} + 3$

[EX 4] $y = 2(x-3)^2 - 1$

[EX 5] $y = (x-2)^2 - 4$

[EX 6] $y = -3(x+6)^2 + 1$

[EX 7] $y = \frac{2}{3}(x-4)^2 + 5$

[EX 8] $y = -8(x-1)^2 + 1$