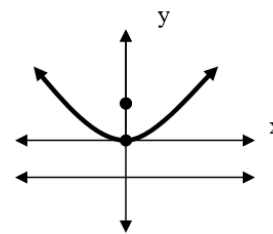


Parabolas

- All Parabolas have a _____, _____, and _____.
- The _____ is always the turning point of the parabola.
- The _____ is always on the inside of the parabola.
- The _____ is the straight line that is outside the parabola.
- The vertex is the _____ between the focus and directrix
- The distance between the vertex and focus or the directrix and vertex is referred to as _____.



Equation	Vertex	Picture	Focus	Directrix	Axis of symmetry
$(x - h)^2 = 4p(y - k)$, $p > 0$; opens up Ex: $(x-2)^2 = 4(2)(y-3)$					
$(x - h)^2 = 4p(y - k)$, $p < 0$; opens down Ex: $(x-2)^2 = 4(-1)(y+3)$					
$(y - k)^2 = 4p(x - h)$, $p > 0$; opens right Ex: $(y-2)^2 = 4(2)(x-3)$					
$(y - k)^2 = 4p(x - h)$, $p < 0$; opens left Ex: $(y-2)^2 = 4(-1)(x-3)$					

Writing Equations given Vertex and Focus

Vertex (2, -3) Focus (2, -5)

Vertex (4, -2) Focus (6, -2)

Writing Equations given Directrix and Focus

Focus: (2,4); directrix line: $x = -4$

Focus: (-4,4); directrix line: $y = -2$