

4

3rd

4/15/13

Mr Hills

All conic sections can be described as fixed distances from points/lines

Parabola: a curve whose points are equidistant from the focus + directrix

Standard Form	Translated Equations	
$y^2 = 4px$ $x^2 = 4py$	$(y-k)^2 = 4p(x-h)$	$(x-h)^2 = 4p(y-k)$

* Focus: $(p, 0)$ Focus: $(h+p, k)$ Focus: $(h, k+p)$
 Vertex: $(0, 0)$ Vertex: (h, k) Vertex: (h, k)
 Directrix: $x = -p$ Directrix: $x = h-p$ Directrix: $y = k-p$

Why is a parabola called a conic section?
(use diagram to right)

Vertical cut that goes through the base.



How does the statement at the top of the page apply to parabolas?

Do parabolas exhibit any symmetry? Describe.