

BUILDING QUADRATIC FUNCTIONS

- Given the coordinates of the vertex and the value of "c".
 - graph opens up, vertex $(3, 2)$, $c = 4$
 - graph opens down, vertex $(-5, -3)$, $c = 1/4$
 - graph opens to the right, vertex $(-2, 7)$, $c = 3/4$
 - graph opens to the left, vertex $(4, -3)$, $c = 6$
- Given the coordinates of the vertex and of the focal point.
 - vertex $(3, 5)$, focal point $(5, 5)$
 - vertex $(-3, 7)$, focal point $(-11, 7)$
 - vertex $(4, -6)$, focal point $(4, -11)$
 - vertex $(-3, -4)$, focal point $(-3, 0)$
- Given the coordinates of the vertex and the equation of the directrix
 - vertex $(2, 3)$, $x = 6$
 - vertex $(-4, 5)$, $x = -5$
 - vertex $(6, 8)$, $y = 12$
 - vertex $(-5, -2)$, $y = -6$
- Given the coordinates of the focal point and the equation of the directrix.
 - focal point $(4, 6)$, $x = 8$
 - focal point $(-3, 6)$, $x = -5$
 - focal point $(6, -9)$, $y = -5$
 - focal point $(-2, -4)$, $y = -8$
- Given the vertex and a point on the curve
 - vertex $(3, 6)$, point $(6, 12)$, opens up
 - vertex $(-2, -5)$, point $(4, -15)$, opens down
 - vertex $(3, -2)$, point $(7, 20)$, opens right
 - vertex $(-4, 2)$, point $(-12, 8)$ opens left
- Given the endpoints of the latus rectum
 - $(-2, 5)$ and $(8, 5)$, opens up
 - $(6, -2)$ and $(6, 16)$ opens right
 - $(-3, 17)$ and $(-3, -3)$, opens left
 - $(-12, -3)$ and $(2, -3)$, opens down