

10.3 Factors and Intercepts

Yesterday

↳ $y = x^2$

↳ $y = (x-h)^2 + k$

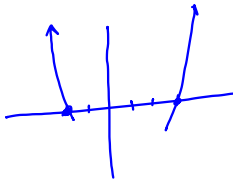
Vertex form
 (h, k) vertex
 $x = h$

Intercept Form
 (refers to where the graph crosses the x-axis)

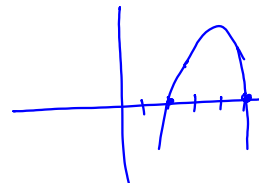
$y = (x-p)(x-q)$

p, q are the intercepts

$y = (x-3)(x+2)$
 x-ints 3, -2



$y = -(x-5)(x-2)$
 x-int 5, 2



$y = (x-p)(x-q)$
 Intercepts (x-int) = p, q

Vertex

Line of Symmetry $x = \frac{p+q}{2}$

Point of Vertex plug in x to find y

y-int set $x=0$ and solve for y

$y = (x-3)(x+1)$

x-ints 3, -1

$x = \frac{3+(-1)}{2} = 1$

$y = (1-3)(1+1)$

$y = (-2)(2) = -4$

$y = (0-3)(0+1) = -3$

