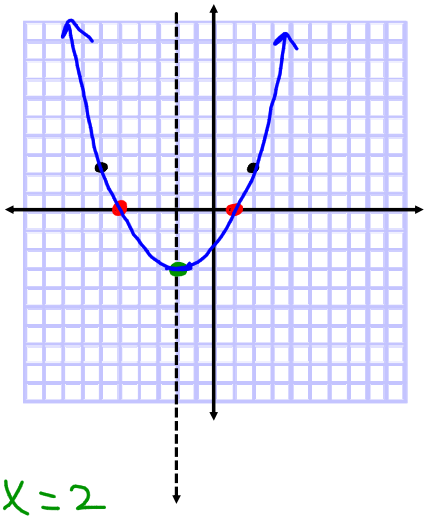
Intercept Form	Axis of Symmetry	Vertex
$p=3 \quad q=-5$ $y = a(x-p)(x-q)$ $y = 2(x-3)(x+5)$	$x = \frac{p+q}{2}$ $x = \frac{3+-5}{2}$ $x = -\frac{2}{2} = -1$ $x = -1$	$x: \frac{p+q}{2}$ $x = -1$ $(-1, ?)$ $y = 2(-1-3)(-1+5)$ $y = 2(-4)(4)$ $y = -32$ $(-1, -32)$

Miscellaneous	Graph
x-intercepts are p and q X-int: 3 & -5 $a > 0$ opens up $a < 0$ opens down	Plot the x-intercepts. Identify and plot the vertex and line of symmetry. Find one other point and its reflection.

Graph: $y = \frac{1}{3}(x-1)(x+5)$ $\quad p=1 \quad q=-5$



$x = \frac{p+q}{2} = \frac{1+-5}{2} = \frac{-4}{2}$

$x = -2$

$(-2, ?)$

$y = \frac{1}{3}(-2-1)(-2+5)$

$y = \frac{1}{3}(-3)(3)$

$= -3$

$(-2, -3)$

$x = 2$

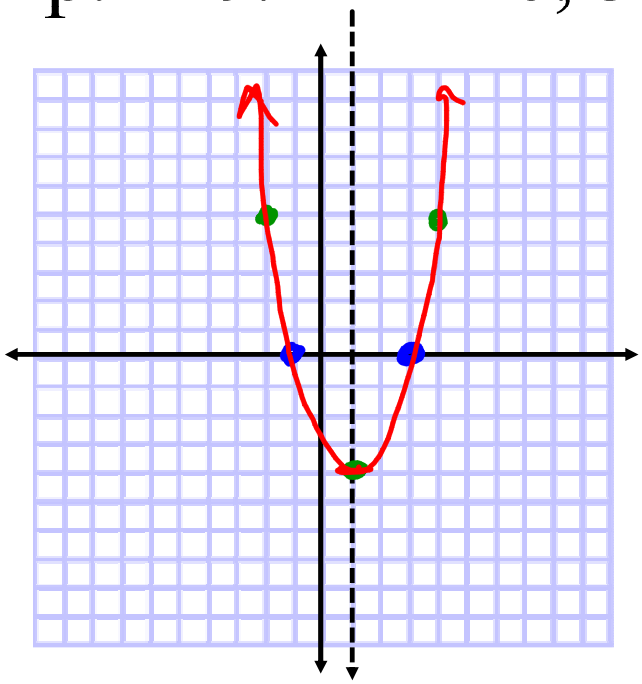
$y = \frac{1}{3}(x-1)(x+5)$

$y = \frac{1}{3}(2-1)(2+5)$

$= \frac{1}{3}(1)(7) = \frac{7}{3} = 2\frac{1}{3}$

$(2, 2\frac{1}{3})$

p. 249/ 14 - 16, 36 - 39, 53, 54 due Tuesday



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

x-int. -1 and 3

$(-1,0)$ and $(3,0)$

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

$x=1$

$(1,?)$

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

$=2(-2)=-4$

$(1,-4)$

$x=4 \quad (4,?)$

$y=(4+1)(4-3)$

$y=5(1)=5$

$(4,5)$