Name: Date: Key Period:

Practice Worksheet: Graphing Quadratic Functions in Intercept Form

For #1-6, label the x-intercepts, axis of symmetry, vertex

1] $y = \frac{1}{2}(x+4)(x-2)$

a = p = q =

x-intercepts: (−4, 0) (2, 0)

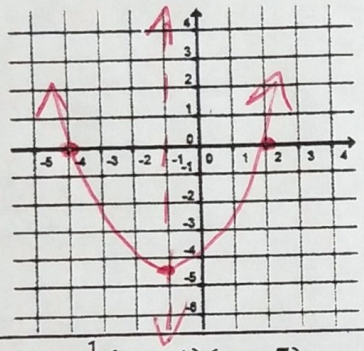
Axis of Symmetry is x= −1

Vertex: (−1, −9/2)

$\frac{1}{2}(-1+4)(-1-2)$

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

Opens up or down?



2] $y = -\frac{1}{2}x(x-8)$

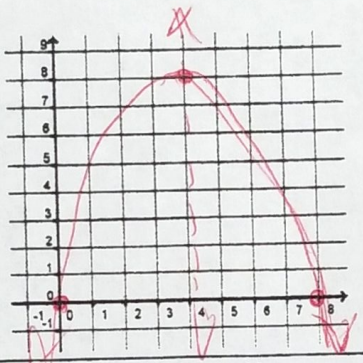
a = p = q =

x-intercepts: (0, 0) (8, 0)

Axis of Symmetry is x= 4

Vertex: (4, 8) $-\frac{1}{2}(4)(-4)$ 8

Opens up or down?



3] $y = (x+2)(x-2)$

a = p = q =

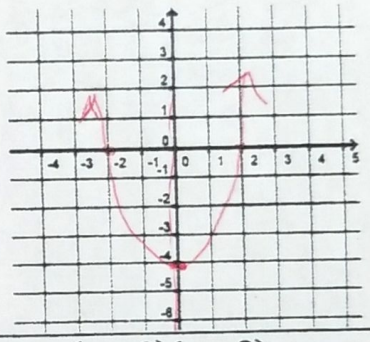
x-intercepts: (−2, 0) (2, 0)

Axis of Symmetry is x= 0

$\frac{-2+2}{2} = 0$

Vertex: (0, −4)

Opens up or down?



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

a = p = q =

x-intercepts: (−1, 0) (5, 0)

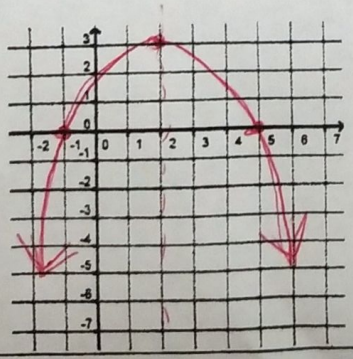
Axis of Symmetry is x= 2

$\frac{-1+5}{2} = 2$

Vertex: (2, 3)

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

Opens up or down?



5] $y = 4(x+2)(x+1)$

a = p = q =

x-intercepts: (−2, 0) (−1, 0)

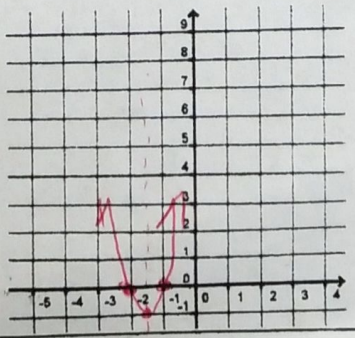
Axis of Symmetry is x= −3/2

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

Vertex: (−3/2, −1)

$4(\frac{1}{2})(-\frac{1}{2})$

Opens up or down?



6] $y = -(x-3)(x-3)$

a = p = q =

x-intercepts: (3, 0) (3, 0)

Axis of Symmetry is x= 3

Vertex: (3, 0)

x	y
2	−1
3	0
4	

Opens up or down?