

## Day 2: Graphing Quadratics Review

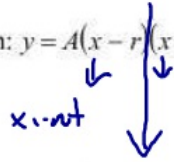
Date \_\_\_\_\_

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We have learned to graph quadratics in 3 different forms. . . We will review today how to graph each form.

1) Factored Form:  $y = A(x-r)(x-s)$

1.



2.

Vertex (a.o.s., min/max)  
plug in a.o.s.

3.

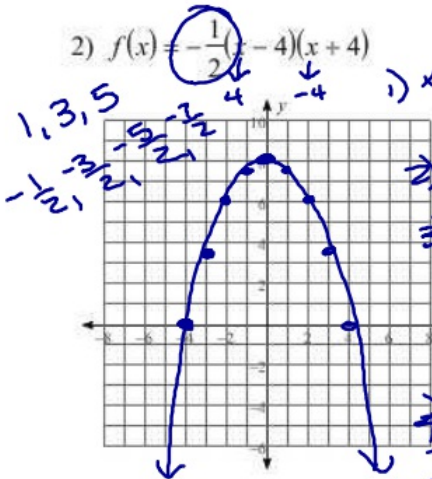
Graph:  
1, 3, 5

4.

5.

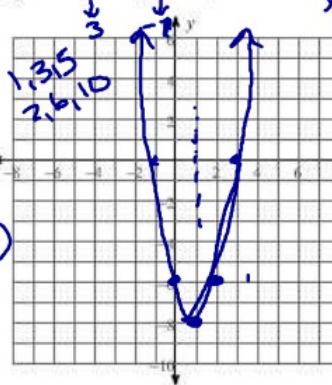
List all key features and graph the quadratic.

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



- 1) x-int (-4, 0) / (4, 0)
- 2) a.o.s. 0
- 3) vertex (0, 8)  
 $y = -\frac{1}{2}(0-4)(0+4)$   
 $-\frac{1}{2}(-4)(4)$   
8
- 4) y-int (0, 8)
- 5) max  $y = 8$

3)  $y = 2(x-3)(x+1)$



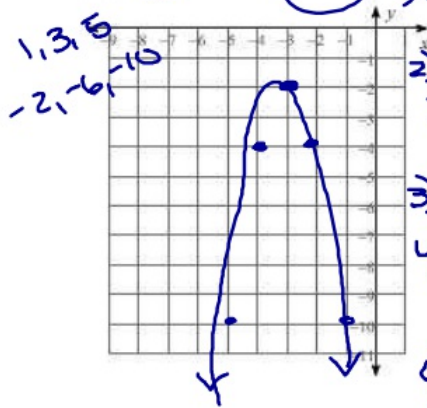
- x-int (3, 0) / (-1, 0)
- a.o.s. 1
- vertex (1, -8)  
 $y = 2(1-3)(1+1)$   
 $= 2(-2)(2) = -8$
- y-int (0, -6)

4) Standard Form:  $y = Ax^2 + Bx + C$

1.  $aos = \frac{-b}{2a}$
2. Vertex  $(\frac{-b}{2a}, \dots)$   
plug in aos
3. 1, 3, 5
- 4.
- 5.

List all key features and graph the quadratic.

5)  $y = -2x^2 - 12x - 20$  1) y-int: Imag: n. 6)  $f(x) = -x^2 - 2x - 5$

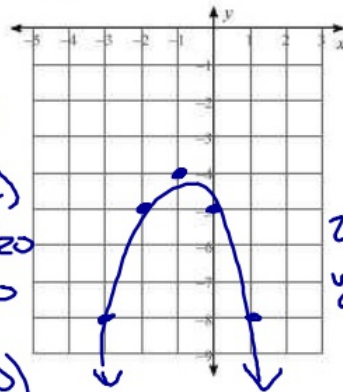


2)  $aos = \frac{-b}{2a}$   
 $\frac{-(-12)}{2(-2)} = \frac{12}{-4} = -3$

3) Vertex  $(-3, -2)$   
 $y = -2(-3)^2 - 12(-3) - 20$   
 $= -18 + 36 - 20$   
 $= -2$

4) y-int  $(0, -20)$

5)  $-2$



$aos = \frac{-b}{2a}$   
 $\frac{-(-2)}{2(-1)} = \frac{2}{-2} = -1$

Vertex  $(-1, -4)$   
 $y = -(-1)^2 - 2(-1) - 5$   
 $= -1 + 2 - 5$   
 $= -4$

7) Vertex Form:  $y = A(x - h)^2 + k$

1.

Vertex:  $(h, k)$

135

2.

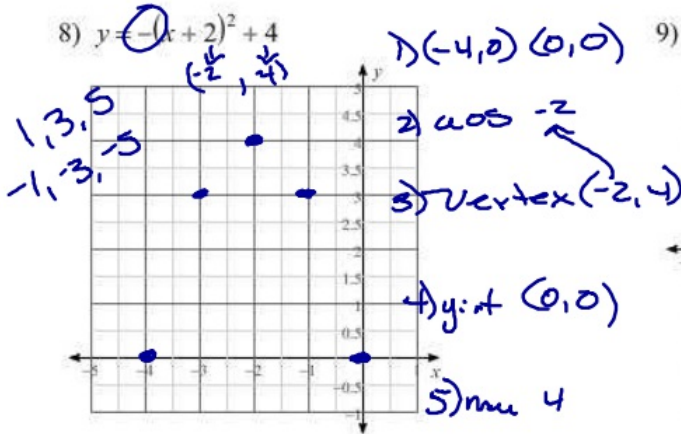
3.

4.

5.

List all key features and graph the quadratic.

8)  $y = -(x+2)^2 + 4$



9)  $f(x) = 2(x+2)^2 - 4$

