

# Tuesday, January 8, 2019

- WELCOME BACK!!

$$\begin{array}{c|c} x & f(x)=y \\ \hline -2 & \\ \hline 0 & \\ \hline \end{array}$$

- Warm-up

- Without using a calculator, graph the following quadratics:

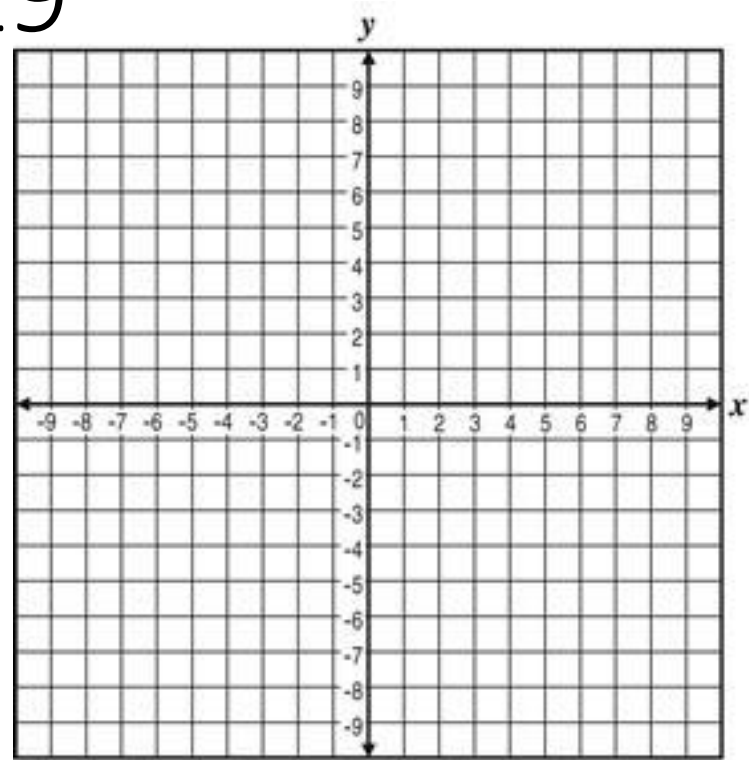
- $f(x) = (x - 3)^2 - 4$

- $f(x) = x^2 - 6x + 5$

$$f(-2) = (-2 - 3)^2 - 4$$

- New groups

- Review the basics of quadratics



### Objectives:

**Content:** I will review the basics of quadratics including vertex form, standard form and graphing.

**Social:** I will work well with my new group members.

**Language:** I will use correct terminology when discussing and writing about quadratics.

# Warm-up

$$f(x) = (x - 3)^2 - 4$$

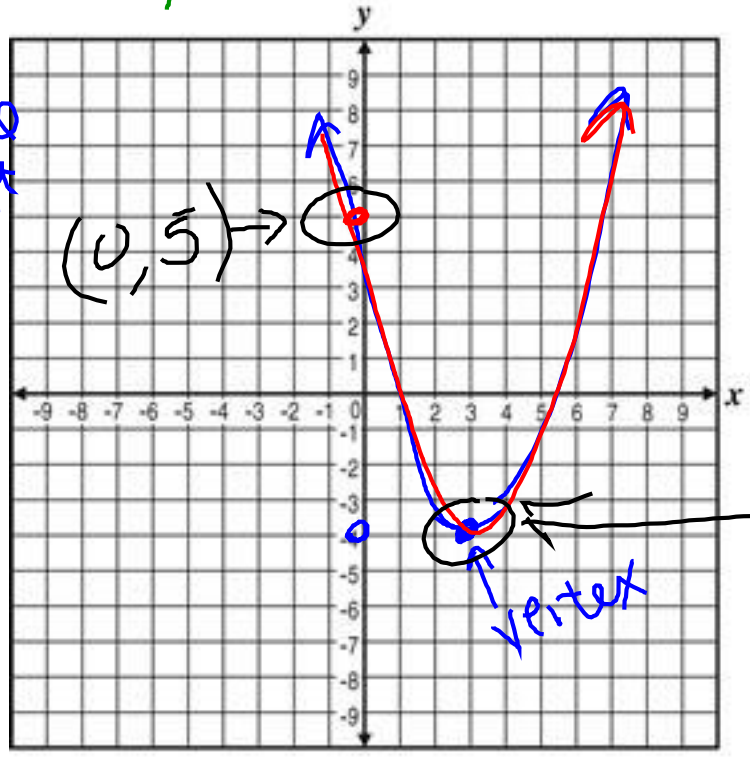
$$f(x) = x^2$$

$$f(x) = x^2 - 6x + 5$$

right  
3

vertical  
shift

vertex  
(3, -4)



y int

(3, -4)

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# Building a New Group...



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# Calendar

Factoring



<http://bit.ly/2tS42m7>

I Am ALWAYS  
DOING WHAT I  
CANNOT DO YET,  
IN ORDER TO LEARN  
HOW TO DO IT

VINCENT VAN GOGH



Quadratic Formula



<http://bit.ly/2da9VhX>

Graphing Quadratics



<http://bit.ly/2Gw7wgU>

## Math 2

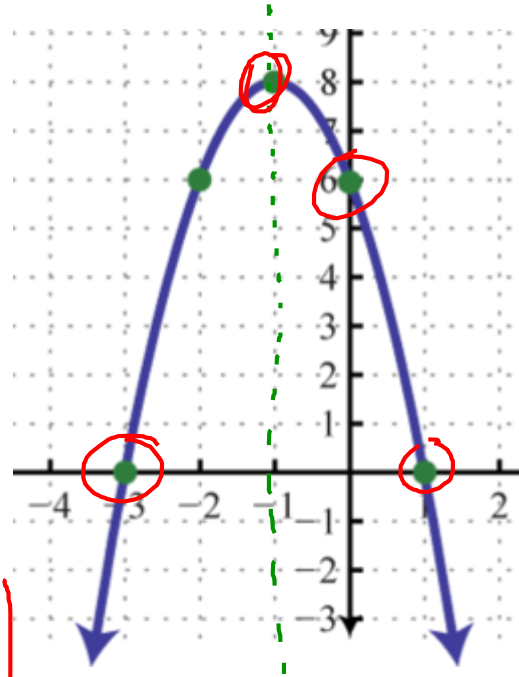
### Unit 4A Quadratics 1

8	Review Quadratics	9	10	11
		Factoring Quadratics		Solving Quadratics with Factoring
14	15	16	17	18
Rewriting & Solving Quadratics	Quadratic Formula Review	Solving Quadratics with the best method		<b>QUIZ</b>

# Big Ideas About Quadratics

- Graph: **Parabola**

- direction: opens up / **opens down**
- x-intercepts: <sup>where it</sup> crosses x-axis **(-3,0) (1,0)**  
solutions, roots
- y-intercept: crosses y-axis **(0,6)**
- axis of symmetry: line down middle **x = -1**
- vertex: minimum / maximum **(-1,8)**



- Vertex Form:  $f(x) = -2(x+1)^2 + 8$

- Standard Form:  $f(x) = -2x^2 - 4x + 6$

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# Homework Set-up & Start

①  $(x + 3)(x + 5)$

$$x^2 + \underline{5x + 3x} + 15$$
$$x^2 + 8x + 15$$

⑦  $(4a - 7)(3a - 2)$

②  $x^2 + 11x + 18$   
 $(x + 2)(x + 9)$

	$x$	$+2$
$x$	$x^2$	$2x$
$+9$	$9x$	$18$

⑬  $(n + 2)(n^2 + 5n - 3)$

$$n^3 + \underline{5n^2} - 3n + \underline{2n^2} + \underline{10n} - 6$$
$$n^3 + 7n^2 + 7n - 6$$

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