

March 15th

Due Today: 9.6

Due Tomorrow: HW 9.7

Unit 9: Quadratic Functions

Lesson 9.7: Quiz + Quadratic Functions

Get Ready: Check your homework!

1) Vertex: $(4, -1)$ 2) vertex: $(-3, -1)$ 3) Vertex: $(2, -2)$ AOS: $x = 4$ AOS: $x = -3$ AOS: $x = 2$ Roots: $x = 3, 5$ Roots: $x = -2, -4$ Roots: $x \approx \frac{1}{2}, 3.5$ 4) Vertex: $(2, -1)$ AOS: $x = 2$ Roots: No Real
Roots $x = .58, 3.42$

HW CHECK

$$y = x^2 - 8x + 15$$

$$x = \frac{-b}{2a} = \frac{8}{2(1)} = 4$$

$$y = (4)^2 - 8(4) + 15$$

$$= 16 - 32 + 15$$

$$y = -1$$

Vertex: (4, -1)

AOS: $x = 4$

Roots: $x = 5, 3$

$$0 = x^2 - 8x + 15$$

$$0 = (x - 5)(x - 3)$$

$$0 = x - 5 \quad , \quad 0 = x - 3$$

$$+5 \quad +5 \quad , \quad +3 \quad +3$$

$$5 = x \quad \quad 3 = x$$

$$\textcircled{3} \quad y = x^2 - 4x + 2$$

$$x = \frac{-b}{2a} = \frac{4}{2(1)} = \underline{2}$$

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

$$= 4 - 8 + 2$$

$$\underline{y = -2}$$

$$\text{Vertex: } (2, -2)$$

$$\text{AOS: } x = 2$$

$$\text{Roots: } x = 3.52, 0.59$$

$$0 = x^2 - 4x + 2$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$= \frac{4 \pm \sqrt{(-4)^2 - 4(1)(2)}}{2(1)}$$

$$= \frac{4 \pm \sqrt{8}}{2}$$

$$= \frac{4 \pm 2.83}{2}$$

$$= \frac{6.83}{2}, \frac{1.17}{2}$$

$$\underline{x = 3.42}, 0.59$$

$$y = \underline{\underline{a}}x^2 + bx + c$$

QUIZ

$$x = \frac{-b}{2a}$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

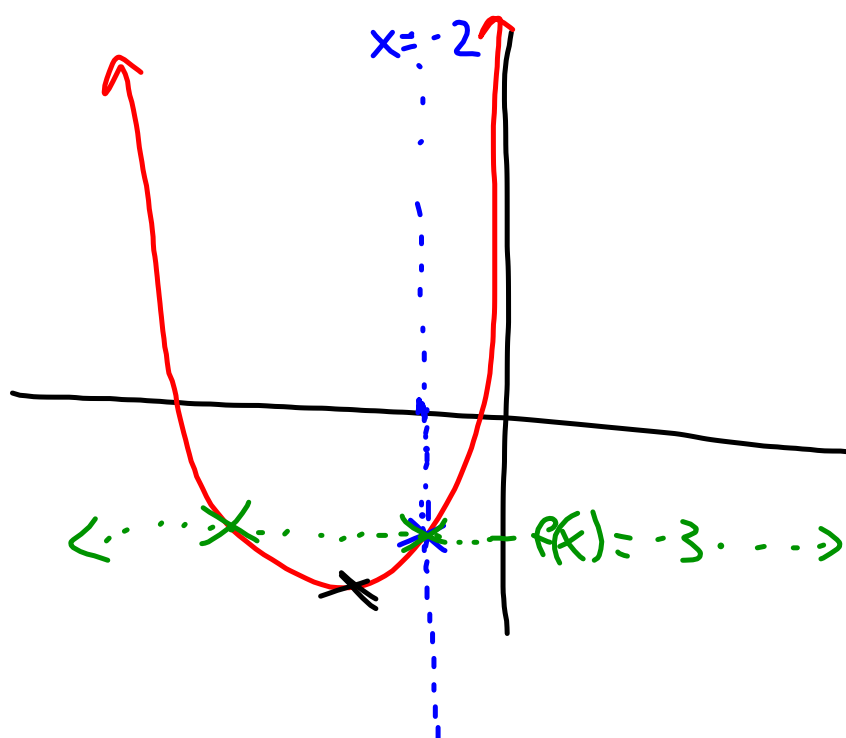
Quadratic Functions

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

When $x = -2$, $f(x) = \underline{-3}$

when $f(x) = -3$, $x = \underline{-2, -4}$

when $f(x) = -4$, $x = \underline{-3}$ *vertex



Parabolas have

1 function value for every x value

2 x values for each function value (except at the vertex)

1) $f(x) = x^2 - 8x + 19$

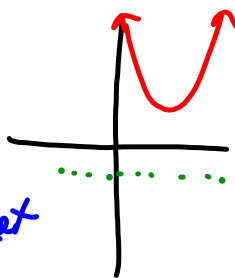
$x = 2, f(x) = 7$

$x = 5, f(x) = 4$

$f(x) = 7, x = 2.6$

$f(x) = 3, x = 4$

$f(x) = -2, x = \text{DNE}$



2) $f(x) = -3x^2 - 21x - 34$

$x = -4, f(x) = \underline{\hspace{2cm}}$

$x = 0, f(x) = \underline{\hspace{2cm}}$

$f(x) = -4, x = \underline{\hspace{2cm}}$

$f(x) = -88, x = \underline{\hspace{2cm}}$

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

$x = 0, f(x) = \underline{\hspace{2cm}}$

$x = -2, f(x) = \underline{\hspace{2cm}}$

$f(x) = 0, x = \underline{\hspace{2cm}}$

$f(x) = -3, x = \underline{\hspace{2cm}}$

Unit 9: Quadratic Equations

Lesson #	Name	Recap	HW
9.1	Intro to Quadratics		HW 9.1
9.2	Solving Quads by Completing the Square		HW 9.2
9.3	Solving Quads using the Quadratic Formula		HW 9.3 QUIZ WED: - factoring, comp. the square, quad formula
9.4	Quiz + Picking a Method		HW 9.4
9.5	Graphing Parabolas		Finish Packet
9.6	Finding the Vertex Algebraically		HW 9.6 QUIZ MONDAY!
9.7	QUIZ + Quad Functions		HW 9.7