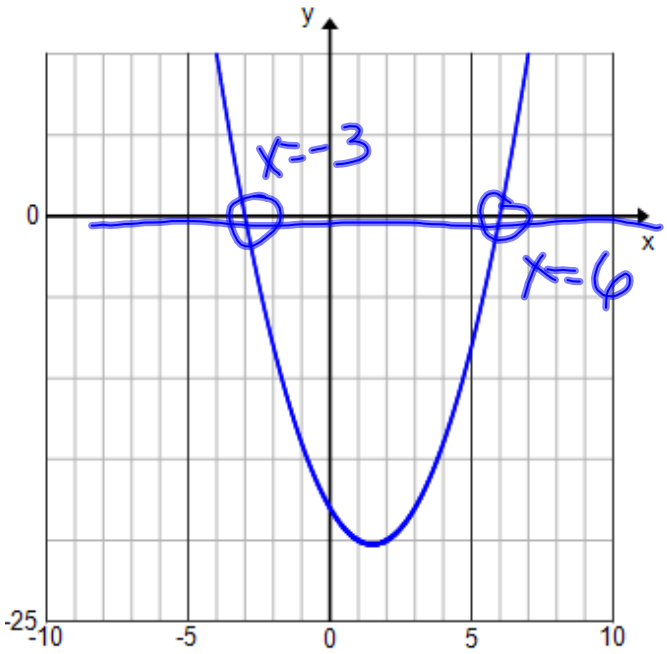

Warm up!

Find the solutions to this graph.

f(x)=0

Explain how you got your answers

Page 7

$y = -3x^2 + 18x - 4$

3) The profits of Mr. Unlucky's company can be represented by the equation, where y is the amount of profit in hundreds of thousands of dollars and x is the number of years of operation. He realizes his company is on the downturn and wishes to sell before he ends up in debt. Use your graphing calculator, as needed. Round solutions to the nearest hundredth.

a) When will Unlucky's business show the maximum profit?

3 years

b) What is the maximum profit?

$2,300,000

$23 hundred thousand

c) At what time will it be too late to sell his business? (When will he start losing money?)

x = 5.768

5.77 years

2. A quarterback throws a football at an initial height of 5.5 feet with an initial upward velocity of 35 feet per second. The height of a tossed ball with respect to time can be modeled by the quadratic function $h(t) = -16t^2 + v_0 \cdot t + h_0$ where v_0 is the initial upward velocity, h_0 is the initial height and $h(t)$ is the height of the ball after t seconds.

a) Write the function that models the height of the ball with respect to time.

$h(t) = -16t^2 + 35t + 5.5$

b) How high will the football be after 1 second? (Consider what the 1 second represents.)

$t = 1$ $h(1) = 24.5$ ft

c) When will the football be 10 feet high? (Consider what the 10 feet represents.)

time xvalue $X = 0.137$ sec. $X = 2.05$ sec.

d) When will the football reach its maximum height? (When graphing the function, consider what significant feature of the graph represents this concept.)

xvalue of max

e) What is the maximum height of the football?

yvalue of max

f) When will the football hit the ground if no one catches it? (When graphing the function, consider what significant feature of the graph represents this concept.)

"zero"

UNIT 5 Part 1: 2T Intermediate Algebra B **Name:** _____ **Period:** ___

Homework Solutions: http://anokahennepin.schoolwires.net/Page/30410

Use this guide to help you evaluate where you are at in this chapter, and identify areas that you need extra help in.

Date Covered	LT Number	Learning Target (LT) (What you should know)	Practice Problems	Homework Score	Self-Evaluation (Do you know it?)
3/12	5.2	I can solve quadratic equations by factoring	5.2A #1 – 33 odd (P-9)		☺ ☹
3/13			5.2B #1 – 9 (P-11)		☺ ☹
3/16			5.2C #6,8 (page 13) #13-17 (P-12)		☺ ☹
3/17 3/18	5.1	I can solve quadratic equations by graphing	5.1A #1, 2, 6-14 (P-1)		☺ ☹
3/19			5.1B #2-5, 8-10 (P-5)		☺ ☹
3/20		Review	Quiz TURN IN 3/23		
3/23	QUIZ	Factoring and Solving by Factoring			☺ ☹

solve by graphing