Math 3

Equations

LEARNING PLAN #4

(Chapter 3)

Name: _____

Date: _____

Period: A1 A2 A3 B1 B2 B3

G_

Skill / Understanding:	Review Problems:
One-Variable Equations ❏ I understand that the solution to a one-variable equation is a point or points on a numberline. ❏ I can solve a wide range of 1-variable equations including ❏ equations that have an extraneous solution ❏ absolute value equations ❏ equations with decimals or fractions ❏ quadratic equations (by factoring and ZPP) ❏ quadratic equations (by quadratic formula) ❏ I can use a graph of a two-variable equation to solve a one-variable equation. (exemplary) ❏ I can use a graph of a system of equations to solve a one-variable equation. (exemplary)	3-10, 3-19, 3-31, 3-32, 3-38, 3-39, 3-42, 3-44, 3-49, 3-51, 3-83, 3-101, 3-104, 3-109 part (d), and CL 3-117
Two-Variable Equations ❏ I can graph a two variable equation. ❏ I understand that the solution to a two-variable equation is every point (ordered pair) on the line or curve.	
Systems of Two-Variable Equations ❏ I understand that the solution to a system of equations are the points (ordered pairs) of intersection between the two curves. ❏ I can solve systems of equations both linear and nonlinear. ❏ I can solve systems of equations algebraically. ❏ I can graph a system of equations. ❏ I can identify the solution(s) of a system of equations when given the graph.	
Understanding Solutions ❏ I understand that a solution of an equation is the value(s) that make the equation(s) true. ❏ I can tell the difference between 1-variable equations and 2 variable equations. ❏ I understand the difference between an equation and an expression, and that expressions do not have solutions.	

PRACTICE PROBLEMS

1) Solve the equations below with the method of your choice. Be sure to check for extraneous solutions.

a. $2|x-1| = -4$ b. $6 = (x-4)^2 - 19$ c. $\frac{x+1}{2} = \frac{3}{x}$

2) How many solutions does the parabola $y = (x-3)^2$ have? How do you know?

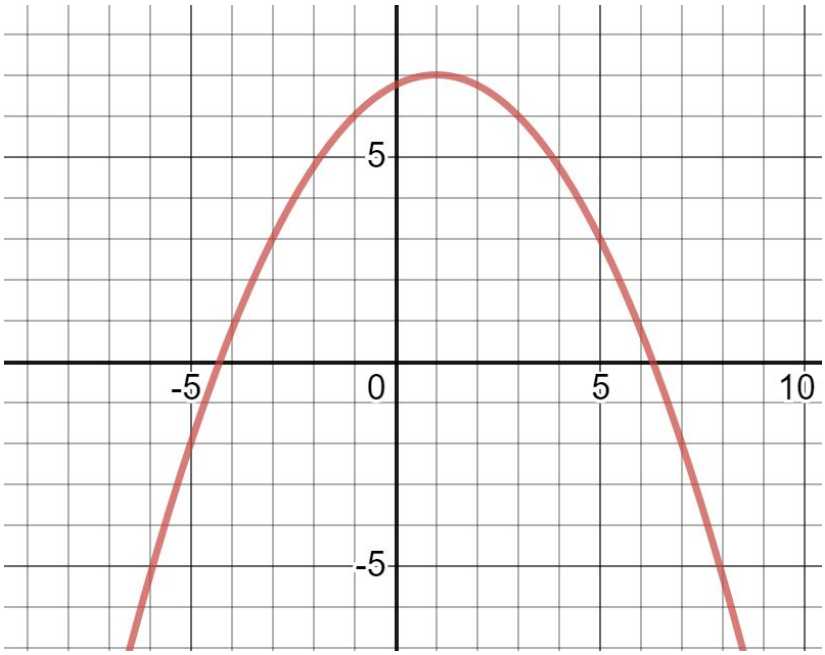
3) Is (1, 4) a solution to the parabola $y = (x-3)^2$? Show how you can use algebra to answer this question.

4) How many solutions could a system of a linear equation and a circle equation have? Sketch each possibility.

5) Solve the system algebraically. Express your solution(s) as ordered pairs.

$$x^2 + y^2 = 25$$
$$y = x + 1$$

6) Use the graph of $y = -\frac{1}{4}(x-1)^2 + 7$ to solve the equation below. Explain how you determined your answer.



$$3 = -\frac{1}{4}(x-1)^2 + 7$$