Math 3

Transformations

LEARNING PLAN

(Chapter 2)

Name: _____

Date: _____

Period: A1 A2 A3 B1 B2 B3

G_

Skill / Understanding:	**Review / Practice Problems:**
Forms of Quadratics ❏ I can rewrite in factored form and identify the x-intercepts, orientation & stretch factor from this form. ❏ I can rewrite in standard form and use this form to identify the y-intercept, orientation, and stretch factor. ❏ I can rewrite in graphing form and use this form to identify the vertex, orientation, and stretch factor. ❏ I can graph a parabola from graphing form or factored form.	2-31, 2-37, 2-64, 2-83, and CL 2-145
Modeling and Curve Fitting ❏ I can model and solve everyday problems using quadratic functions. ❏ I can calculate the equation of a quadratic function, given the vertex and a point on the curve.	2-18, 2‑30, 2-85, 2-139, and CL 2-143
Families of Functions ❏ I can write equations of transformed functions/equations and/or sketch their graphs ❏ I know the equations of the parent function of quadratic, square root, absolute value, and cubic functions, and equations of circles. ❏ I know the graphing form of the functions listed above and of circles.	2-43, 2-44, 2-56, 2-63, 2‑97, 2‑102, 2‑119, CL 2-144, CL 2‑146, and CL 2‑148
Solving Quadratics ❏ I can solve Quadratic Equations by factoring and using the ZPP. ❏ I can solve Quadratic Equations with the Quadratic Formula.	Checkpoint 2, CL 1‑116, 2-6, 2‑21(c), 2‑65(a), 2-105, 2‑123(b), 2‑128, and CL 2-149.

Practice Problems:

1) Rewrite the quadratic equation in factored form and identify the x-intercepts, orientation and stretch factor:

$y = -2x^2 - 7x - 5$

2) Rewrite the quadratic equation in standard form and identify the y-intercept, orientation and stretch factor.

$y = 4(x-2)^2 + 3$

3) Rewrite the quadratic equation in graphing form and identify the vertex, orientation and stretch factor.

$y = x^2 + 4x - 5$

4) Graph the Quadratic equation: $y = -\frac{1}{3}(x+2)(x-4)$

5) Freddy the frog is working on his Leaps. He is trying to jump as high and as far as he can. His best jump so far is 10 inches long and 6 inches high. Sketch a graph of the situation and write an equation that models his best jump.

6) The parent graph a square root function is translated right 2 units, reflected across the x-axis and stretched vertically by a factor of 4 and translated up 3 units. Write the equation and graph the transformed function.

7) Given the equation $y = -2|x+3| - 5$,

i. Which family of functions does this equation belong to?

ii. What is the equation of the parent graph?

iii. Describe the transformation.