

DAILY LESSON PLAN

Teacher's Name Alex , Breanna, Mariella Number of Days 1-2 days or (60 min)

Unit/Topic: Quadratic and Absolute Value Transformations Class/Grade Level Integrated Math 2

Content-learning objective(s).

Transformations or Graph -> Equation: Given the various transformations of a quadratic

(from the parent) or a Graph, you should be able to write the equation in vertex form

Absolute Value Equation-> Transformations/Graph: Given an absolute value function,

describe the various transformations from the parent and sketch a graph.

State Standards Addressed: Indiana A2.FF.1,A2.FF.2, A2.FF.3,

CCSS.F.BF.3

Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. *Include recognizing even and odd functions from their graphs and algebraic expressions for them.*

Other Standards Addressed (if applicable, [ELD Standards](#), [CS Standards](#)):

Materials Needed: Laptop/Chromebook, Geogebra, Journal, Pencil, exit ticket copy

<https://www.geogebra.org/m/dn8upn23>

Activity Time	Teacher Actions include links to activities and formative assessments	Anticipated Student Responses
5 min	Notice and wonders: Parent functions: x^2 , $ x $ Shifts of quadratic and absolute value:	I notice a variable with an exponent I notice the two vertical bars I wonder what the vertical bars mean
30 min	Questions to work on GeoGebra	Equations, and writing about the question sets regarding absolute value and quadratics
20 min	Extension Practice Problems:	Write out equations involving cubic and square root
5 min	Prompt for exit ticket on Geogebra to write in notebook 3-2-1	Students write out their work in their notebook.

3-2-1 Quick Assessment

3 Facts learned from the lesson.

2 New words revealed using context clues.

1 Question about a part that was confusing.

copy page if needed

Differentiated Instruction Options:

The extension activity can extend the activity to cubic and square roots for students who need more of a challenge.

Students who are struggling can be encouraged to work on the main questions, since those extension concepts will be covered as the main focus of another lesson.

Printout of GeoGebra activity for students who cannot access devices. They will be partnered with a student so they can follow and see the visualizations.

Assessment:

Formative assessment in the 3-2-1 exit ticket