

Name: Sharon Hampton

Grade Level/Subject: 8th math

Topic: The relationship of linear and quadratic equations to their graphs

Objectives (P.A.S.S.): To observe and generalize the effects on the graphs of lines and parabolas as coefficients and constants are changed in the equation

Standard 1.c Predict the effect on the graph of a linear equation when the slope changes (eg make predictions from graphs, identify the slope in the equation $y=mx+b$ and relate to a graph)

Introduction: Ask students how many have ever gone skiing? Are there different levels of ability? How are they labeled or how do you know how difficult or easy a particular path is on the mountain?

Instructional process: Play Module C Best Quest Algebra's cool Module 8 Lesson I to learn the ways to express or meaning of slope. Pass out calculators and handouts. Explain how to use the graphic features of the calculator. Write two equations of lines and enter into calculator then comparing the graphs with the equations themselves. After getting familiar with the calculator read the story of Lucy Linear and follow worksheet instructions.

Closure: After students have worked in groups compare the labels of their graphs to see if all groups came up with the same labels on the ski slopes. If they differ than ask why they thought or choose the one they did and see if they can convince each other who may be right or wrong.

Assessment: Listening and observing the conversations in the small groups allows you to quickly tell how things are moving along. When handout was completed than came back together as a class to compare.

Modifications/Accommodations: Spend more time on working individually with those that are having trouble using the graphic calculator.

Reflection: The students liked the story of Lucy Linear and using the graphic calculators. Took more time than I had planned will need to use 2 or 3 class periods. Can also extend into parabolas, absolute value etc.