Introduction

Slippery Slope[1]

COMMON CORE STATE STANDARDS TARGETED:
> CCSS: 8EE.5B - Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.

> CCSS Math Practices:
> #3 – Construct viable arguments and critique the reasoning of others.

LEARNING GOALS:
Students will understand/ be able to…
- Recognize similar triangles have the same slope.
- Make connection between proportional relationships and similar triangles (i.e., similar triangles are proportionally related).
- Justify answers and critique others' reasoning.

EXPECTATIONS:
We will know we've accomplished our learning goal when students…
- Explain the mathematical meaning of similar triangles and how similar triangles are related (i.e., the ratio of their "legs" or rise/run that are equal).
- Determine slope based on information from points/coordinates on graph (i.e., comparing two triangles) & write equation for line in slope-intercept form.
- Provide evidence to support our thinking about another's work. Justify why they agree or disagree, citing key information and errors.

Across tasks, students should be aware of the following expectations:
Work is accurate and precise:
- The problem is set up in a way that helps you solve it.
- Your responses use appropriate units.
- You have checked your work for calculation errors.
Student explanations:
- Describe what you did and why you did it.

- Use <u>multiple representations</u> to show your thinking about math.
- Include a logical argument and evidence to support each answer. It makes sense.

ESTIMATED TIME:
- Approximately 50 minutes

MATERIALS:
- PowerPoint slides
- Student worksheet
- Answer Key

WAYS TO MAKE THIS TASK MORE ACCESSIBLE FOR ALL LEARNERS:
- Have students take a minute to think about, write down some real life examples of slope.
- While not required, we encourage you to spend an additional 10-15 minutes during a later class providing feedback to students based on your analysis of their Final Lift work, before you begin the next task.

WAYS TO EXTEND THIS TASK:
- Have students write their own "exit ticket" based on the Workout problem (e.g., They write a question that involves three students making points on a graph, connecting those points with a line and finding the slope of that line).
- Have students try a challenge question (either individually or in small groups).