Introduction

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…
- Reason about unit rate (i.e., cost per pound).
- Compare two rates using a graph and other representations (e.g., a greater rate means a greater slope and a steeper line when the slope is positive).

EXPECTATIONS:
We will know we've accomplished our learning goals when students…
- Determine the unit rate (cost per pound) based on information given.
- Compare rates from a graph to identify which fruit costs more (i.e., recognize that steeper slope indicates higher cost per pound) and create a table or equation that reasonably represents that graph.
- Use words (and other representations) to: a) justify their thinking vs. identify the answer; and, b) describe the meaning of lines within a graph.

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 multiple representations 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:

- If a student has difficulty starting the Workout or Final Lift, encourage him or her to draw a picture (another type of representation) to help them think.
- We highly encourage you to spend an additional 10-15 minutes during a subsequent class providing feedback to students based on your analysis of their Final Lift work.

WAYS TO EXTEND THIS TASK:

- Encourage students to come up with their own questions or examples related to proportional relationships. Challenge them to think of other situations that could be graphed similar to the cost of fruit per pound.
- Can students think of a *non-proportional* relationship? What would such a relationship look like if it were graphed?