Subject area/course: Mathematics/Algebra II
Grade level/band: 11
Task source: Center for Collaborative Education (CCE); Primary Author: Devin McNelly

Which is a Better Deal?

STUDENT INSTRUCTIONS

A. Task context:
Getting a "good deal" is a challenge for every consumer. For example, if you decide to purchase a cell phone plan from the major phone carriers (e.g., Verizon, T-Mobile, AT&T), how do you know which is a better deal?

This multi-step task is designed to give you practice in strengthening your skills to make well-informed decisions about purchases you might make for yourself in the real world. For this task, imagine that you are in the market to purchase a product or service that you really want. It's a real splurge and you have multiple options for purchasing. The four tasks listed below are designed to help you with your decision-making process in order to determine which purchase option is the better deal.

B. Final product:
Task #1:
Identify a good/service that you want to purchase, and develop criteria for choosing the best option. Look for an item that can be purchased both online (e.g., Amazon) and in a store (e.g., Best Buy). Based on your research, narrow your search down to two options. Consider cost differences, different shipping charges, taxes, purchasing something new or used, etc. In addition, sometimes the value of the good/service being purchased is greater than the actual cost for it. Construct a table that makes clear the criteria (both tangible and intangible) that are informing your decision-making process.

Task #2:
Using your mathematical reasoning skills, evaluate which of the two options is a "better deal." Your assignment is to create a report that analyzes what is a "better deal" between comparable goods or services and includes the following:
- A system of equations that provide a model of the rate for the different options
- A graph of the system that shows the solution on the graph
- An explanation of how you solved the system algebraically
- An explanation of the costs (tangible and intangible) and benefits (tangible and intangible) of the two options
- Your analysis of the solution in context

Task #3:
Create and deliver a short oral presentation (2-2.5 minutes in length) regarding your findings. You will be responsible for providing a visual, which highlights your mathematical reasoning in recommending a "better deal."

Task #4:
If you were purchasing the same good/service for a family member who would use this differently from you, how would your answer change? Use the same mathematical reasoning skills used in Task #2 to inform your answer.

ADDITIONAL INFORMATION

C. Knowledge and skills you will need to demonstrate on this task:
1. On this task, you will show that you know these things:
   - How to create a model of rates for the given services/goods being evaluated with a system of equations
   - How to conduct an analysis and arrive at a solution
2. On this task, you will show that you are able to do these things:
   - Create a report that analyzes what is a "better deal" between two comparable goods or services
   - Present your findings to your classmates

D. Materials needed:
- Access to Internet
- Graph paper, or a mechanism for creating graphs (such as Excel)

E. Time requirements:
You will have seven class periods to work on this assignment.

F. Scoring:
Your work will be scored using the Math Performance Assessment Rubric. You should make sure you are familiar with the language that describes the expectations for proficient performance.