**Math 1 Demo Lesson**
**Focus Areas "A" and "C"**
**High-Quality Questions and Student Interaction**

**Objective:** Students will solve systems of linear equations in any form, using methods of substitution, elimination, tables, and/or graphs resulting from a mathematical context. Students will make meaning of the solution in terms of the context of the problem.

**Task:** Problem Based Task 3.2.2: Salary Scales

**SMPs Addressed:**

SMP 1: Students will predict a solution before jumping into the problem, and will come up with a plan for approaching the problem before doing any calculations. Students will explain their reasoning to a partner.

SMP 2: Students will take the problem out of context in order to solve algebraically, graphically, or in a table. Students will make meaning of their solution by putting it back in the context of the problem.

SMP 3: Students will create arguments for their approach to solving the problem and also to their solution, and will share with a partner or small group. Students will critique others' reasoning for their approach and solution to the problem.

1) Read the prompt out loud twice, underlining parts of the prompt that you think are important
2) What is important in this prompt?
   a. Talk to a partner about what you

c. What are 2 questions or comments that you have for this group (be sure to frame these respectfully)?

<u>Independent Practice/Homework</u>

Extension question to original prompt:

Your boss has agreed to give you a third salary option. This option includes a base salary of $160 plus 20% of the amount of the merchandise you sell. Will you take this new offer? Use mathematics and words to explain why are why not.

## Your Task

You have recently been offered a part-time job as a salesperson at a local cell phone store. You

# Critique the Reasoning of Another Group's Solution

1. How did the other group approach the problem? How does this compare to how your group approached the problem?

2. What decision did the group come to and what was their reasoning behind this decision?

3. What are 2 questions or comments that you have for this group (be sure to frame these respectfully)?

# Independent Practice

## Original Prompt:

You have recently been offered a part-time job as a salesperson at a local cell phone store. You have a choice of two different pay scales. The first option is to receive a base salary of $300 a week plus 10% of the merchandise you sell. The second option is a base salary of $220 a week plus 18% of the price of the merchandise you sell. The average phone sells for $200, and accessories are also included in the merchandise sales. Which of these two options will you choose and **why**?

## Extension Question:

Your boss has agreed to give you a third salary option. This option includes a base salary of $160 plus 20% of the amount of the merchandise you sell. Will you take this new offer? Use mathematics and words to explain why are why not.

## Your Task

You have recently been offered a part-time job as a salesperson at a local cell phone store. You