

**Operations and Algebraic Thinking**  
**CCSSO Math SCASS**  
**October 1-3**

Complete the tasks, and think about what standards or clusters they illustrate within the OA domain. Also consider their connection to A-SSE.

1. Comparing Products

Leo and Silvia are looking at the following problem:

How does the product of  $60 \times 225$  compare to the product of  $30 \times 225$ ?

Silvia says she can compare these products without multiplying the numbers out. Explain how she might do this. Draw pictures to illustrate your explanation.

2. Video Game Scores

Eric is playing a video game. At a certain point in the game, he has 31500 points. Then the following events happen, in order:

- He earns 2450 additional points.
  - He loses 3310 points.
  - The game ends, and his score doubles.
- a. Write an expression for the number of points Eric has at the end of the game. Do not evaluate the expression. The expression should keep track of what happens in each step listed above.
- b. Eric's sister Leila plays the same game. When she is finished playing, her score is given by the expression

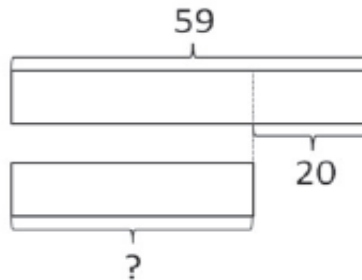
$$3(24500 + 3610) - 6780.$$

Describe a sequence of events that might have led to Leila earning this score.

### 3. Pencil and a Sticker

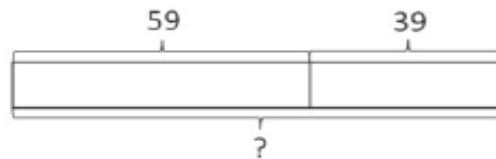
A pencil costs 59 cents, and a sticker costs 20 cents less. How much do a pencil and a sticker cost together?

The pencil costs 59 cents, and the sticker costs 20 cents less than that:



So the sticker costs  $59 - 20 = 39$  cents.

The cost of the two together:



is  $59 + 39 = 98$  cents.

### 4. Analyzing word problems involving multiplication

Many problems can be solved in different ways. Decide if the following word problems can be solved using multiplication. Explain your thinking.

- Liam is cooking potatoes. The recipe says you need 5 minutes for every pound you are cooking. How many minutes will it take for Liam to cook 12 pounds of potatoes?
- Mel is designing cards. She has 4 different colors of paper and 7 different pictures she can glue on the paper. How many different cards can she make with one color of paper and one picture?
- Nina can practice a song 6 times in an hour. If she wants to practice the song 30 times before the recital, how many hours does she need to practice?
- Owen is building a rectangular tile patio that is 4 tiles wide and 6 tiles long. How many tiles does he need?