

PROBLEM-OF-THE-DAY: ALGEBRA 1

WEEK: November 12 to November 16

DAY: Friday

RISD Objective: Given a word problem that reflects the increase or decrease of something, students will determine the percent of increase or decrease.

PROBLEM #62

Staci bought a car last year for \$15,985. This year, the car is valued at \$13,250. What is the percent of decrease (change)? At the same rate of decrease, what will her car be valued at next year? Show and explain your work.

MODEL SOLUTION #62

$$\text{Percent of change} = \frac{\text{change_in_number_of_price}}{\text{original_number_of_price}}$$

To find the percent of decrease, subtract the two values and divide them by the original value.

$$\text{Percent of change} = \frac{15,985 - 13,250}{15,985} = \frac{2,735}{15,985} = 0.17 = 17\%$$

The percent of decrease is 17%.

If the percent of decrease is the same next year:

Find 17% of 13,250 and then subtract that number from 13,250.

$$\text{Decrease value for next year} = (0.17)(13,250) = 2,252.50$$

$$\text{Total car value for next year} = 13,250 - 2,252.50 = 10,997.50$$

Staci's car value will be \$10,997.50 next year.