

PROBLEM-OF-THE-DAY: ALGEBRA 1**WEEK:** November 12 to November 16**DAY:** Wednesday

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

PROBLEM #60

Christopher weighs 195 pounds. After dieting for 3 months, his weight dropped to 170 pounds. Find the percent of decrease in Christopher's weight. If Christopher stays on this diet, predict how much he will weigh after another 3 months, if he loses weight at this same rate. Show and explain your work.

MODEL SOLUTION #60

$$\text{Percent of change} = \frac{\text{change_in_number_of_pounds}}{\text{original_number_of_pounds}}$$

$$\text{Percent of change} = \frac{195 - 170}{195} = \frac{25}{195} = 0.13 = 13\%$$

The percent of decrease in Christopher's weight is 13%.

If the percent of decrease is the same for the next 3 months:

Find 13% of 170 and then subtract that number from 170.

Decrease number of pounds = $(0.13)(170) = 22.1$ or 22 pounds.

Total pounds for next 3 months = $170 - 22 = 148$ pounds.

Christopher's weight after another 3 months will be 148 pounds.