

PROBLEM-OF-THE-DAY: ALGEBRA 1**WEEK:** September 10 to September 14 **DAY:** Thursday

RISD Objective: Given a first-degree equation (or word problem which can be modeled by a first-degree equation), students will use the properties of equality to solve the equation.

PROBLEM #18

Kara is bored, riding in her parent's SUV across New Mexico on Interstate 40. She is looking out the window, watching as they pass the green mile marker signs. The sum of the numbers on the last three consecutive mile marker signs is 366. What were the mile markers that Kara's family just passed? Show and explain your work.

MODEL SOLUTION #18

Since the mile markers were consecutive integers, we can represent their numbers the following way:

Let x = the number on the first sign

$x + 1$ = the number on the second sign

$x + 2$ = the number on the third sign

Since the sum of the numbers is 366, the equation would be:

$$x + (x + 1) + (x + 2) = 366$$

$$3x + 3 = 366$$

$$3x = 363$$

$$x = 121$$

If the first mile marker sign is 121, the next two are 122 and 123. Therefore, these were the three mile marker signs that Kara and her family passed.