Problem Solving: Work Backward

Use the Work Backward strategy to solve. Explain why your answer makes sense.

1. Anna and Kirby went running together on Saturday and Sunday. Kirby ran \( \frac{1}{3} \) mile more than Anna on Saturday. Kirby ran a total of 3 miles on Saturday. How many miles did Anna run?

\[ 3 - \frac{1}{3} = \frac{8}{3} \]

3. Greg’s family went on vacation and kept track of the amount of gasoline they used over the 3 days. On the second day, they used \( \frac{3}{5} \) of a tank more than on the first day. On the third day, they used \( \frac{1}{3} \) of a tank less than on the second day. They used \( \frac{4}{5} \) of a tank on the third day. How much gas did they use on the first day?

4. Angela made a side salad for dinner. She put in \( \frac{3}{4} \) cup more lettuce than tomato in the salad. She put \( \frac{1}{4} \) cup more cucumber than tomato in the salad. She put \( \frac{1}{2} \) cup cucumber in the salad. How much lettuce did Angela put in her salad?

\[ \frac{1}{2} - \frac{1}{4} = \frac{1}{4} \]

\[ \frac{1}{4} + \frac{3}{4} = \frac{1}{2} \]

5. Mariah’s class collected soup labels to raise money for their school. Each day they placed the collected labels in a jar to see how much they collected that day. They kept track of how much they collected over a week. On Tuesday, they collected \( \frac{1}{8} \) jar more than on Monday. On Wednesday, they collected \( \frac{1}{2} \) jar more than on Tuesday. On Thursday, they collected \( \frac{1}{4} \) jar less than on Wednesday. On Friday, they collected \( \frac{3}{8} \) more than on Thursday. On Friday, \( \frac{3}{4} \) of the jar was filled with soup labels. How much of a jar did they collect on Monday?

6. Susan knit a blanket for her niece. Susan put \( \frac{1}{3} \) more pink yarn than purple yarn in the blanket. There is \( \frac{5}{9} \) less purple yarn than white yarn. The blanket is \( \frac{3}{4} \) white yarn. How much of the blanket is pink yarn?