Adding Fractions
Use What You've Learned
Answers and Explanations

Try to calculate the following answers mentally. If you need to, make a diagram to help.

1. Skylar and his crew needed to purchase additional nails for the house. He determined that $\frac{5}{6}$ pound was needed for the bathroom and $\frac{1}{3}$ pound was needed for the closets. How many additional pounds of nails are needed?

   $\frac{5}{6} + \frac{1}{3}$ Add to find the total number of pounds of nails Skylar needs to complete the bathroom and the closets.

   $\frac{1}{3} = \frac{2}{6}$ A common denominator is six, so rename $\frac{1}{3}$.

   $\frac{5}{6} + \frac{2}{6} = \frac{7}{6}$ or $1\frac{1}{6}$ Add like fractions to get the answer.

2. Jason traveled $1\frac{3}{10}$ miles to get more building supplies in the morning. Then he traveled $2\frac{1}{2}$ miles for copper wire in the afternoon. How many miles did Jason travel in all?

   $1\frac{3}{10} + 2\frac{1}{2}$ Add to find the total number of miles Jason traveled.

   $2\frac{1}{2} = 2\frac{5}{10}$ A common denominator is 10, so rename $2\frac{1}{2}$.

   $1\frac{3}{10} + 2\frac{5}{10} = 3\frac{8}{10}$ or $3\frac{4}{5}$ Add like fractions to get the answer.

3. Try to solve the following addition problems mentally. Describe the reasoning you use to determine each answer.

$\frac{2}{5}+\frac{3}{10}$ Strategy 1: $\frac{2}{5}=\frac{4}{10}$ $\frac{4}{10}+\frac{3}{10}=\frac{7}{10}$

$\frac{1}{2}+\frac{7}{10}$ Strategy 1: $\frac{1}{2}=\frac{5}{10}$ $\frac{5}{10}+\frac{7}{10}=\frac{12}{10}$ or $1\frac{2}{10}=1\frac{1}{5}$

Strategy 2: Split $\frac{7}{10}$ into $\frac{5}{10}$ and $\frac{2}{10}$. Think of $\frac{5}{10}$ as $\frac{1}{2}$. Add $\frac{1}{2}$ and $\frac{1}{2}$ to get one, and add the remaining $\frac{2}{10}$, or $\frac{1}{5}$. The answer is $1\frac{1}{5}$.

$\frac{5}{6}+\frac{2}{3}$ Strategy 1: $\frac{2}{3}=\frac{4}{6}$ $\frac{5}{6}+\frac{4}{6}=\frac{9}{6}$ or $1\frac{3}{6}=1\frac{1}{2}$

Strategy 2: Split $\frac{5}{6}$ into $\frac{3}{6}$ and $\frac{2}{6}$. Think of $\frac{3}{6}$ as $\frac{1}{2}$ and $\frac{2}{6}$ as $\frac{1}{3}$. Add $\frac{1}{3}+\frac{2}{3}$ to get 1 and add the remaining $\frac{1}{2}$. The answer is $1\frac{1}{2}$.

$\frac{3}{4}+\frac{5}{8}$ Strategy 1: $\frac{3}{4}=\frac{6}{8}$ $\frac{6}{8}+\frac{5}{8}=\frac{11}{8}$ or $1\frac{3}{8}$

Strategy 2: Split $\frac{5}{8}$ into $\frac{2}{8}$ and $\frac{3}{8}$. Think of $\frac{2}{8}$ as $\frac{1}{4}$. Add $\frac{3}{4}$ and $\frac{1}{4}$ to get 1 and add the remaining $\frac{3}{8}$. The answer is $1\frac{3}{8}$.