Math
Fractions

Fraction Word Problems:
+ Adding with Unlike Denominators

When you add fractions with unlike denominators, first you need to make the denominators equal.

Example: $\frac{1}{3} + \frac{1}{2}$ ← *numerator* / ← *denominator*

1. Multiply each fraction by the other fraction's denominator.

- Multiply both the numerator and the denominator of $\frac{1}{3}$ by 2. $\frac{1}{3} \times \frac{2}{2} = \frac{2}{6}$ ← *denominator*
  Notice that now the denominator is equal to 6.
  (Remember: any number over itself is equal to 1! Since we multiplied by the equivalent of 1, $\frac{1}{3}$ is equal to $\frac{2}{6}$.)
- Multiply both the numerator and the denominator of $\frac{1}{2}$ by 3. $\frac{1}{2} \times \frac{3}{3} = \frac{3}{6}$ ← *denominator*
  Notice that now the denominator is equal to 6.

2. Now you have $\frac{2}{6}$ and $\frac{3}{6}$. Add them together. $\frac{2}{6} + \frac{3}{6} = \frac{5}{6}$

Solve the word problems by adding fractions.

Mr. Snail walked $\frac{1}{6}$ mile in the morning and $\frac{2}{7}$ mile in the evening. How many miles did he walk in total?

1. Multiply each fraction by the other fraction's denominator.

Multiply $\frac{1}{6}$ by $\frac{7}{7}$. $\frac{1}{6} \times \frac{7}{7} = \frac{7}{42}$

Multiply $\frac{2}{7}$ by $\frac{6}{6}$. $\frac{2}{7} \times \frac{6}{6} = \frac{12}{42}$

2. Now you get $\frac{7}{42}$ and $\frac{12}{42}$

3. Add them together. $\frac{7}{42} + \frac{12}{42} = \frac{19}{42}$

Read the question below and use another piece of paper to find the answer. Show your work.

Mr. Snail weighs $\frac{2}{5}$ pound and Ms. Butterfly weighs $\frac{3}{8}$ pound. How much do they weigh together?

Together, they weigh $\frac{31}{40}$ pound.