Math
Fractions

Fraction Word Problems:
– Subtracting with Unlike Denominators

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

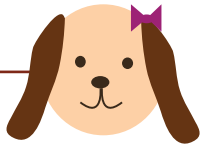
Example:

$\frac{3}{4} - \frac{1}{5}$ ← *numerator* ← *denominator*

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

- Multiply both the numerator and the denominator of $\frac{3}{4}$ by 5. $\frac{3}{4} \times \frac{5}{5} = \frac{15}{20}$ ← *denominator*
  Notice that now the denominator is equal to 20.
  (Remember: any number over itself is equal to 1! Since we multiplied by the equivalent of 1, $\frac{3}{4}$ is equal to $\frac{15}{20}$.)
- Multiply both the numerator and the denominator of $\frac{1}{5}$ by 4. $\frac{1}{5} \times \frac{4}{4} = \frac{4}{20}$ ← *denominator*
  Notice that now the denominator is equal to 20.

2. Now you have $\frac{15}{20}$ and $\frac{4}{20}$. Subtract them. $\frac{15}{20} - \frac{4}{20} = \frac{11}{20}$



Solve the word problems by subtracting fractions.

The puppy is $\frac{5}{6}$ of a foot tall and the kitten is $\frac{2}{5}$ of a foot tall. How much taller is the puppy than the kitten?

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

Multiply $\frac{5}{6}$ by $\frac{5}{5}$. $\frac{5}{6} \times \frac{5}{5} = \frac{\quad}{\quad}$

Multiply $\frac{2}{5}$ by $\frac{6}{6}$. $\frac{2}{5} \times \frac{6}{6} = \frac{\quad}{\quad}$

2. Now you have $\frac{\quad}{\quad}$ and $\frac{\quad}{\quad}$

3. Subtract them. $\frac{\quad}{\quad} - \frac{\quad}{\quad} = \frac{\quad}{\quad}$

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

The puppy ate $\frac{3}{4}$ of a carton of milk and the kitten ate $\frac{5}{7}$ of a carton of milk.

How much more did the puppy eat?