

Adding & Subtracting Fractions

Common Denominators

$$\frac{3}{5} \quad \leftarrow \text{numerator}$$
$$\frac{3}{5} \quad \leftarrow \text{denominator}$$

With common denominators keep the denominator, add or subtract the numerator

Different Denominators

When adding and subtracting fractions with un-common (different) denominators, the least common multiple of the denominators must be found.

Example: $\frac{2}{3}$

$$\underline{\hspace{2cm}} + \frac{2}{5}$$

Step 1: Find least common multiple (denominators)

3: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30

5: 5, 10, 15, 20, 25, 30, 35

Step 2: Use least common denominator to find the fraction that would make it equivalent. See example below. RULE: What you multiply the denominator by you must multiply the numerator by.

$$\begin{array}{r} \frac{2}{3} \times \frac{5}{5} = \frac{10}{15} \\ + \frac{2}{5} \times \frac{3}{3} = \frac{6}{15} \\ \hline \frac{16}{15} \end{array}$$

Step 3: Reduce/simplify if necessary (Divide 15 into 16 = 1 time)
 $\frac{16}{15} = 1 \frac{1}{15}$ 1 remainder = numerator