

Study Guide
Adding, Subtracting, Dividing, and Multiplying fractions

Adding fractions: (sample problem) $1\frac{1}{2} + 3\frac{3}{8} =$

Step 1. Make each line segment into an improper fraction. $\frac{3}{2} + \frac{27}{8} =$

$1\frac{1}{2} =$ The two in the denominator remains. The numerator is calculated by multiplying the 2 x 1 (whole number) and adding the 1 in the numerator. $= \frac{3}{2}$

Step 2. Once both line segments are converted into improper fractions, a common denominator must be found.

8 is the common denominator. Multiply $\frac{3}{2} \times \frac{4}{4} = \frac{12}{8} \Rightarrow \frac{12}{8} + \frac{27}{8} =$

Step 3. Add numerators and maintain the same denominator. $\frac{12}{8} + \frac{27}{8} = \frac{39}{8}$

Step 4. Reduce: $\frac{39}{8} = 4\frac{7}{8}$

Subtracting fractions: (sample problem) $3\frac{3}{8} - 1\frac{1}{2} =$

Note: The process is the same as adding fractions except at the end when the subtraction function occurs.

Step 1. Make each line segment into an improper fraction. $\frac{27}{8} - \frac{3}{2} =$

Step 2. Once both line segments are converted into improper fractions, a common denominator must be found.

8 is the common denominator. Multiply $\frac{27}{8} - (\frac{3}{2} \times \frac{4}{4} = \frac{12}{8}) \Rightarrow \frac{27}{8} - \frac{12}{8} =$

Step 3. Subtract numerators and maintain the same denominator. $\frac{27}{8} - \frac{12}{8} = \frac{15}{8}$

Step 4. Reduce: $\frac{15}{8} = 1\frac{7}{8}$
