Estimating Sums and Differences of Fractions and Mixed Numbers

You can use rounding to estimate sums and differences of fractions and mixed numbers. To estimate the sum or difference of proper fractions, round each fraction to 0, $\frac{1}{2}$, or 1.

EXAMPLE

1 **Estimate each sum or difference.**

a. $\frac{5}{8} + \frac{9}{10}$

$\frac{5}{8} + \frac{9}{10} \rightarrow \frac{1}{2} + 1 = 1\frac{1}{2}$

The sum of $\frac{5}{8}$ and $\frac{9}{10}$ is about $1\frac{1}{2}$.

b. $\frac{5}{6} - \frac{3}{8}$

$\frac{5}{6} - \frac{3}{8} \rightarrow 1 - \frac{1}{2} = \frac{1}{2}$

$\frac{5}{6} - \frac{3}{8}$ is about $\frac{1}{2}$.

To estimate the sum or difference of mixed numbers, round each mixed number to the nearest whole number or to the nearest $\frac{1}{2}$.

EXAMPLE

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2 **Estimate each sum or difference.**

a. $3\frac{3}{8} + 15\frac{15}{16}$

$3\frac{3}{8} + 15\frac{15}{16} \rightarrow 3\frac{1}{2} + 16 = 19\frac{1}{2}$

The sum of $3\frac{3}{8}$ and $15\frac{15}{16}$ is about $19\frac{1}{2}$.

b. $10\frac{3}{4} - 4\frac{1}{6}$

$10\frac{3}{4} - 4\frac{1}{6} \rightarrow 11 - 4 = 7$

$10\frac{3}{4} - 4\frac{1}{6}$ is about 7.