

## Adding fractions vertically with unlike denominators

Add the following fractions. This is another guided worksheet so that students can learn the steps to [add different fractions](#) vertically.

$$\begin{array}{r}
 1) \quad \frac{3}{8} \xrightarrow{\quad} \frac{3 \times 5}{8 \times 5} \xrightarrow{\quad} \frac{15}{40} \\
 + \frac{2}{5} \xrightarrow{\quad} \frac{2 \times 8}{5 \times 8} \xrightarrow{\quad} \frac{16}{40} \\
 \hline
 \\
 \\
 \hline
 = \frac{31}{40} \\
 \hline
 \end{array}$$

Students need to follow the direction of arrows, for each fraction. As both the fractions have the denominators as 8 and 5, hence the common denominator is 40 (lcm for 8 and 5).

Then work towards changing both the fractions into equivalent fractions with denominator 40. Once the denominators are same add the numerators.

$$\begin{array}{r}
 2) \quad \frac{4}{6} = \frac{4 \times 4}{6 \times 4} = \frac{\square}{24} \\
 \frac{3}{8} = \frac{3 \times 3}{8 \times 3} = \frac{9}{\square} \\
 \hline
 \\
 \\
 \hline
 = \frac{\square}{24} = 1 \frac{\square}{24} \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 3) \quad \frac{6}{9} = \frac{6 \times \square}{9 \times \square} = \frac{\square}{18} \\
 \frac{1}{6} = \frac{1 \times \square}{6 \times 3} = \frac{\square}{18} \\
 \hline
 \\
 \\
 \hline
 = \frac{15}{\square} = \frac{\square}{6} \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 4) \quad \frac{5}{5} = \frac{\square \times 2}{\square \times 2} = \frac{\square}{10} \\
 \frac{1}{2} = \frac{1 \times 5}{2 \times 5} = \frac{\square}{\square} \\
 \hline
 \\
 \\
 \hline
 = \frac{\square}{10} = \frac{\square}{2} \\
 = 1 \frac{1}{\square} \text{ ans} \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 5) \quad \frac{3}{4} = \frac{3 \times 3}{4 \times 3} = \frac{\square}{\square} \\
 \frac{3}{3} = \frac{3 \times 4}{3 \times 4} = \frac{\square}{\square} \\
 \hline
 \\
 \\
 \hline
 = \frac{\square}{12} = \frac{7}{\square} \\
 = \square \frac{1}{2} \text{ ans} \\
 \hline
 \end{array}$$