

Subtracting Fractions by Regrouping

Sometimes you need to subtract a mixed number from a whole number or from a mixed number with a “too small” fractional part. Before you can subtract, you need to regroup the top whole number.

EXAMPLE Subtract $2\frac{3}{4}$ from $6\frac{1}{4}$.

STEP 1 Regroup 6 as $5\frac{4}{4}$. Then $6\frac{1}{4} = 5\frac{4}{4} + \frac{1}{4}$.

$$\begin{array}{r} 5\frac{4}{4} + \frac{1}{4} \\ - 2\frac{3}{4} \\ \hline \end{array}$$

STEP 2 Combine the top fractions. $\frac{4}{4} + \frac{1}{4} = \frac{5}{4}$, so $6\frac{1}{4} = 5\frac{5}{4}$.

$$\begin{array}{r} 5\frac{5}{4} \\ - 2\frac{3}{4} \\ \hline \end{array}$$

STEP 3 Subtract the fractions and subtract the whole numbers. Reduce if needed.

$$\begin{array}{r} 5\frac{5}{4} \\ - 2\frac{3}{4} \\ \hline 3\frac{2}{4} = 3\frac{1}{2} \end{array}$$

ANSWER: $3\frac{1}{2}$

Subtract. Reduce each answer to lowest terms.

1.
$$\begin{array}{r} 3\frac{1}{4} \\ - \frac{3}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 2\frac{1}{3} \\ - \frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 1\frac{3}{5} \\ - \frac{4}{5} \\ \hline \end{array}$$

2.
$$\begin{array}{r} 5 \\ - 2\frac{1}{2} \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ - 1\frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ - 3\frac{5}{8} \\ \hline \end{array}$$

3.
$$\begin{array}{r} 4\frac{1}{6} \\ - 3\frac{5}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 8\frac{5}{16} \\ - 4\frac{11}{16} \\ \hline \end{array}$$

$$\begin{array}{r} 7\frac{3}{8} \\ - 2\frac{7}{8} \\ \hline \end{array}$$

4.
$$\begin{array}{r} 14\frac{1}{4} \\ - 8\frac{2}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 19\frac{3}{8} \\ - 10\frac{4}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 26\frac{5}{12} \\ - 18\frac{8}{12} \\ \hline \end{array}$$