

5.4 Regrouping to Subtract Mixed Numbers

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Dec 4-10:59 AM



Regroup $2\frac{1}{4}$ as $1\frac{5}{4}$.



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

The tree has grown $\frac{1}{2}$ ft since it was planted.

Dec 4-12:09 PM

Subtract. Write each answer in simplest form.

$$7 \frac{1}{6} - 2 \frac{5}{6}$$

$$7 \frac{1}{6} \rightarrow 6 \frac{7}{6}$$

Rename $7 \frac{1}{6}$ as $6 + 1 \frac{1}{6} = 6 + \frac{6}{6} + \frac{1}{6}$.

$$\begin{array}{r} -2 \frac{5}{6} \\ \hline \end{array}$$

Subtract the fractions and then the whole numbers.

$$4 \frac{2}{6} = 4 \frac{1}{3}$$

Write the answer in simplest form.

Jan 4-3:43 PM

Subtract. Write each answer in simplest form.

$$8 \frac{2}{5} - 6 \frac{7}{10}$$

$$7 \frac{8}{5} = \frac{4}{10} + \frac{10}{10} = \frac{14}{10}$$

$$\begin{array}{r} -6 \frac{7}{10} \\ \hline \end{array}$$

$$\begin{array}{r} 1 \frac{7}{10} \\ \hline \end{array}$$

Jan 4-3:43 PM

Subtract. Write each answer in simplest form.

$$6 - 3\frac{2}{3}$$

$$6 \rightarrow 5\frac{3}{3}$$

Write 6 as a mixed number with a denominator of 3. Rename 6 as $5 + \frac{3}{3}$.

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

Jan 4-3:43 PM

Subtract. Write each answer in simplest form.

$$5\frac{1}{3} - 2\frac{3}{4} \quad \cancel{4} \cancel{5} \frac{1}{3} = \frac{4}{12} + \frac{12}{12} = \frac{16}{12}$$

$$- 2\frac{3}{4} = \frac{9}{12}$$

$$\begin{array}{r} \cancel{5} \frac{1}{3} \\ - 2 \frac{3}{4} \\ \hline 2 \frac{7}{12} \end{array}$$

Jan 4-3:43 PM

Subtract. Write each answer in simplest form.

$$5\frac{1}{8} - 2\frac{5}{8}$$

$$\begin{array}{r} 4\cancel{5}\frac{1}{8} + \frac{8}{8} = \frac{9}{8} \\ - 2\frac{5}{8} \\ \hline 2\frac{4}{8} = 2\frac{1}{2} \end{array}$$

Jan 4-3:43 PM

Subtract. Write each answer in simplest form.

$$7\frac{1}{6} - 3\frac{7}{12}$$

$$\begin{array}{r} 6\cancel{7}\frac{1}{6} = \frac{2}{12} + \frac{12}{12} = \frac{14}{12} \\ - 3\frac{7}{12} \\ \hline 3\frac{7}{12} \end{array}$$

Jan 4-3:44 PM

Subtract. Write each answer in simplest form.

$$5 - 2\frac{3}{4}$$

5 → $4\frac{4}{4}$ Write 5 as a mixed number with a denominator of 4. Rename 5 as $4 + \frac{4}{4}$

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

Jan 4-3:44 PM

Subtract. Write each answer in simplest form.

$$8\frac{1}{2} - 4\frac{2}{3}$$

$$8\frac{1}{2} = \frac{3}{6} + \frac{6}{6} = \frac{9}{6}$$

$$\begin{array}{r} 8\frac{1}{2} = \frac{9}{6} \\ - 4\frac{2}{3} = \frac{4}{6} \\ \hline 4\frac{5}{6} \end{array}$$

~~$3\frac{1}{2}$~~ $3\frac{5}{6}$

Jan 4-3:44 PM

Li is making a quilt. She needs 15 yards of fabric.

Li has $2\frac{3}{4}$ yards of fabric. How many more yards does she need?

$$\begin{array}{r}
 \cancel{14} \cancel{15} \frac{4}{4} \\
 - \quad 2 \frac{3}{4} \\
 \hline
 12 \frac{1}{4} \text{ yd.}
 \end{array}$$

Jan 4-3:44 PM

Peggy is making curtains. She needs 13 yards of fabric.

Peggy has $4\frac{5}{6}$ yards of fabric. How many more yards does she need?

$$\begin{array}{r}
 \cancel{12} \cancel{13} \frac{6}{6} \\
 - \quad 4 \frac{5}{6} \\
 \hline
 8 \frac{1}{6} \text{ yd.}
 \end{array}$$

Jan 4-3:44 PM