



SKILL 6: Subtracting Mixed Numbers with Like Denominators

Just as you can subtract whole numbers and fractions, you can subtract mixed numbers. If the fraction to be subtracted is larger than the other fraction, you must rename so that the fraction part is 1 more and the whole number part is 1 less.

Example 1

Rename $4\frac{2}{3}$ as $3\frac{?}{3}$.



Rename 4 as $3 + \frac{3}{3}$. Then add $\frac{2}{3}$.

$$4\frac{2}{3} = 3 + \frac{3}{3} + \frac{2}{3} = 3\frac{5}{3}$$

$$\text{So, } 4\frac{2}{3} = 3\frac{5}{3}.$$



Example 2

Find $6\frac{1}{4} - 2\frac{3}{4}$ in simplest form.

Rename $6\frac{1}{4}$ as
 $5\frac{4}{4} + \frac{1}{4}$, or $5\frac{5}{4}$

Subtract the
fractions.

Subtract the whole numbers.

Write the difference in simplest form.

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

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

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

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

$$\text{So, } 6\frac{1}{4} - 2\frac{3}{4} = 3\frac{1}{2}.$$

Guided Practice

Rename each number.

1. $2\frac{4}{5} = 1\frac{\square}{5}$

2. $10\frac{1}{2} = 9\frac{\square}{2}$

3. $16\frac{5}{8} = 15\frac{\square}{8}$

4. $5 = 4\frac{\square}{3}$

Subtract. Write each difference in simplest form.

5. $5\frac{1}{3} \rightarrow 4\frac{\square}{3}$

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

6. $8 \rightarrow 7\frac{\square}{5}$

$$\begin{array}{r} 8 \\ - 3\frac{2}{5} \\ \hline \square\frac{\square}{\square} \end{array}$$

7. $7\frac{1}{8} \rightarrow 6\frac{\square}{8}$

$$\begin{array}{r} 7\frac{1}{8} \\ - 2\frac{5}{8} \\ \hline \square\frac{\square}{\square} = \square\frac{\square}{\square} \end{array}$$

SKILL 6: Practice

Rename each number.

1. $8 = 7\frac{\square}{5}$

2. $4\frac{1}{8} = 3\frac{\square}{8}$

3. $5\frac{3}{5} = 4\frac{\square}{5}$

4. $3\frac{4}{9} = 2\frac{\square}{9}$

5. $5 = 4\frac{\square}{12}$

6. $9\frac{1}{6} = 8\frac{\square}{6}$

Subtract. Write each difference in simplest form.

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

8.
$$\begin{array}{r} 6\frac{1}{4} \\ - 4\frac{3}{4} \\ \hline \end{array}$$

9.
$$\begin{array}{r} 5\frac{2}{5} \\ - 2\frac{4}{5} \\ \hline \end{array}$$

10.
$$\begin{array}{r} 7 \\ - 4\frac{4}{9} \\ \hline \end{array}$$

11.
$$\begin{array}{r} 3\frac{2}{7} \\ - 1\frac{6}{7} \\ \hline \end{array}$$

12.
$$\begin{array}{r} 8 \\ - 3\frac{3}{4} \\ \hline \end{array}$$

13.
$$\begin{array}{r} 6 \\ - 4\frac{5}{8} \\ \hline \end{array}$$

14.
$$\begin{array}{r} 9 \\ - 2\frac{1}{2} \\ \hline \end{array}$$

15.
$$\begin{array}{r} 4\frac{1}{8} \\ - 1\frac{3}{8} \\ \hline \end{array}$$

16.
$$\begin{array}{r} 12 \\ - 3\frac{3}{4} \\ \hline \end{array}$$

17.
$$\begin{array}{r} 5\frac{3}{8} \\ - 2\frac{7}{8} \\ \hline \end{array}$$

18.
$$\begin{array}{r} 7 \\ - \frac{5}{6} \\ \hline \end{array}$$

19. $6\frac{2}{9} - 3\frac{7}{9} = \underline{\hspace{2cm}}$

20. $4\frac{1}{12} - 1\frac{5}{12} = \underline{\hspace{2cm}}$

21. $3 - 2\frac{3}{5} = \underline{\hspace{2cm}}$

Solve.

22. Caitlin buys 3 pounds of peanuts. She uses $1\frac{7}{8}$ pounds to make some trail mix. How many pounds of peanuts does she have left? _____23. Brad rode his bike $4\frac{3}{10}$ miles. Then he ran $2\frac{9}{10}$ miles. How much farther did he ride than run? _____24. Find $12 - 8\frac{2}{3}$ in simplest form. Skill 6

A $3\frac{1}{3}$

C $4\frac{1}{3}$

B $3\frac{2}{3}$

D $4\frac{2}{3}$

25. Find $\frac{11}{12} - \frac{7}{12}$ in simplest form. Skill 5

F $\frac{1}{4}$

H $\frac{4}{11}$

G $\frac{1}{3}$

J $\frac{4}{7}$