

5-3 Study Guide and Intervention***Adding and Subtracting Mixed Numbers***

To add or subtract mixed numbers:

1. Add or subtract the fractions. Rename using the LCD if necessary.
2. Add or subtract the whole numbers.
3. Simplify if necessary.

Example 1 Find $14\frac{1}{2} + 18\frac{2}{3}$.

$$\begin{array}{r} 14\frac{1}{2} \rightarrow 14\frac{3}{6} \\ + 18\frac{2}{3} \rightarrow + 18\frac{4}{6} \\ \hline \end{array}$$

Rename the fractions.

Add the whole numbers and add the fractions.

$$32\frac{7}{6} \text{ or } 33\frac{1}{6}$$

Simplify.

Example 2 Find $21 - 12\frac{5}{8}$.

$$\begin{array}{r} 21 \rightarrow 20\frac{8}{8} \\ - 12\frac{5}{8} \rightarrow - 12\frac{5}{8} \\ \hline \end{array}$$

Rename 21 as $20\frac{8}{8}$.

First subtract the whole numbers and then the fractions.

$$8\frac{3}{8}$$

Exercises

Add or subtract. Write in simplest form.

1. $7\frac{3}{4} + 2\frac{3}{4} = 10\frac{1}{2}$

2. $14\frac{2}{9} - 6\frac{1}{9} = 8\frac{1}{9}$

3. $9\frac{1}{5} - 4\frac{3}{4} = 4\frac{9}{20}$

4. $7\frac{1}{8} + 5\frac{3}{8} = 12\frac{1}{2}$

5. $7\frac{3}{4} + 2\frac{2}{3} = 10\frac{5}{12}$

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

7. $5\frac{1}{2} - 3\frac{1}{4} = 2\frac{1}{4}$

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

9. $9 - 3\frac{2}{5} = 5\frac{3}{5}$

10. $2\frac{2}{3} + 7\frac{1}{2} = 10\frac{1}{6}$

11. $6\frac{1}{2} - 6\frac{1}{3} = \frac{1}{6}$

12. $18\frac{1}{2} + 5\frac{5}{8} = 24\frac{1}{8}$