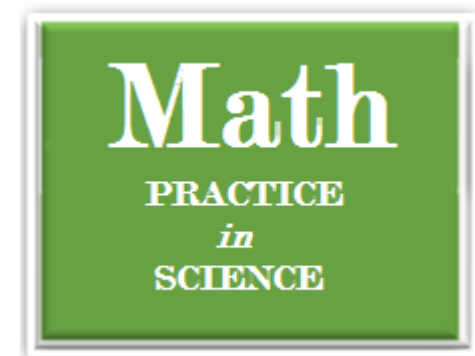


034 Math Practice

Adding Fractions with Unlike Denominators



Adding fractions requires like, or common, denominators. If the denominators are not alike, then a common denominator must be found. Always consider the larger of the given denominators as a possible common denominator.

Hint: Try dividing the smaller denominator into the larger denominator. If the remainder is zero, then the larger denominator can be used as a common denominator.

Example: Add $2\frac{2}{7}$ and $5\frac{3}{28}$.

Step 1: Find the least common multiple for the denominators 7 and 28. $28 \div 7 = 4$.
The remainder is zero. Use 28 as the common denominator.

Step 2: Raise the smaller fraction to higher terms with 28 as the new denominator.

Step 3: Proceed with the addition. Add the numerators and the whole number parts.

$$\begin{array}{r} 2\frac{2}{7} \\ + 5\frac{3}{28} \\ \hline \frac{2}{7} \times \frac{4}{4} = \frac{8}{28} \\ 2\frac{2}{7} = 2\frac{8}{28} \\ + 5\frac{3}{28} = 5\frac{3}{28} \\ \hline 7\frac{11}{28} \end{array}$$

**Find the least common denominator and add.
Express your answers in lowest terms.**

1. $13\frac{4}{9}$
 $+ 2\frac{3}{36}$

2. $15\frac{1}{5}$
 $+ 6\frac{6}{25}$

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

4. $5\frac{2}{18}$
 $+ 4\frac{5}{6}$

5. $28\frac{5}{32}$
 $+ 6\frac{2}{8}$

6. $2\frac{3}{13}$
 $+ \frac{5}{52}$

7. $3\frac{4}{37}$
 $+ 5\frac{3}{74}$

8. $6\frac{5}{12}$
 $+ 4\frac{2}{3}$

9. $4\frac{2}{5}$
 $+ 3\frac{7}{15}$

10. $16\frac{5}{10}$
 $+ 8\frac{2}{30}$

11. $5\frac{6}{7}$
 $+ 4\frac{8}{42}$

12. $9\frac{6}{35}$
 $+ 8\frac{4}{7}$

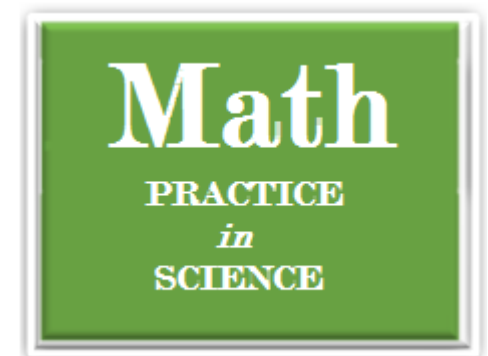
13. $7\frac{5}{39}$
 $+ \frac{1}{13}$

14. $38\frac{5}{36}$
 $+ 4\frac{3}{12}$

15. $3\frac{5}{18}$
 $+ 8\frac{5}{54}$

035 Math Practice

Using Least Common Multiples



Often, the fractions that you need to add have unlike denominators. You may not be able to find a common denominator in the problem. Then you need to use the least common multiple as the common denominator.

Example: Add $5\frac{3}{4}$ and $2\frac{1}{6}$.

Step 1: Find the least common multiple of 4 and 6.

The multiples of 4 are
(4, 8, **12**, 16, 20, 24, 28, 32.....)

The multiples of 6 are

The least common multiple is 12. (6, **12**, 18, 24, 30, 36.....)

Use 12 as the least common denominator.

Step 2: Raise the fractions to higher terms with 12 as the new denominator.

$$\begin{array}{r} 5\frac{3}{4} = 5\frac{9}{12} \\ + 2\frac{1}{6} = 2\frac{2}{12} \\ \hline 7\frac{11}{12} \end{array}$$

Add these fractions. Express your answers in lowest terms.

$$\begin{array}{r} 1. \quad 5\frac{2}{7} \\ + 6\frac{4}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 6\frac{5}{6} \\ + 2\frac{3}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 39\frac{1}{2} \\ + 4\frac{3}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 5\frac{2}{7} \\ + 5\frac{3}{9} \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 6\frac{4}{8} \\ + 2\frac{1}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 4\frac{1}{6} \\ + 3\frac{5}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 8\frac{1}{3} \\ + 4\frac{1}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 8\frac{1}{6} \\ + 2\frac{2}{7} \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 4\frac{2}{15} \\ + 2\frac{1}{2} \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 16\frac{9}{11} \\ + \frac{1}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 3\frac{2}{9} \\ + 2\frac{1}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 4\frac{2}{5} \\ + 2\frac{3}{11} \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 16\frac{5}{11} \\ + 4\frac{3}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad 3\frac{1}{5} \\ + \frac{3}{10} \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad 2\frac{3}{5} \\ + 4\frac{1}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 16. \quad 5\frac{1}{6} \\ + 2\frac{3}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 17. \quad 9\frac{5}{6} \\ + 4\frac{1}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 18. \quad 4\frac{1}{2} \\ + 3\frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 19. \quad 8\frac{1}{7} \\ + \frac{5}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 20. \quad 4\frac{2}{9} \\ + 5\frac{1}{5} \\ \hline \end{array}$$