

Add Subtract – Solutions

1. $\frac{7}{12} - \frac{5}{12} = \frac{7-5}{12} = \frac{2}{12}$, not reduced, proper $\rightarrow \frac{2 \div 2}{12 \div 2} = \boxed{\frac{1}{6}}$

2. $\frac{3}{8} + \frac{7}{8} = \frac{3+7}{8} = \frac{10}{8}$ not reduced, improper $\rightarrow \frac{10 \div 2}{8 \div 2} = \frac{5}{4}$

$$\begin{array}{r} 4 \overline{) 5} \\ \underline{-4} \\ 1 \end{array} \quad \boxed{1 \frac{1}{4}}$$

3. $\frac{2}{5} + \frac{1}{2} = \frac{2 \times 2}{5 \times 2} + \frac{1 \times 5}{2 \times 5} = \frac{4}{10} + \frac{5}{10}$

$\frac{4}{10} + \frac{5}{10} = \frac{4+5}{10} = \boxed{\frac{9}{10}}$ proper, reduced

4. $\frac{5}{8} + \frac{5}{12} = \frac{5 \times 3}{8 \times 3} + \frac{5 \times 2}{12 \times 2} = \frac{15}{24} + \frac{10}{24}$

$\frac{15}{24} + \frac{10}{24} = \frac{25}{24}$ improper, reduced

$$\begin{array}{r} 1 \\ 24 \overline{) 25} \\ \underline{-24} \\ 1 \end{array} \quad \boxed{1 \frac{1}{24}}$$

5. $\frac{2}{3} + \frac{4}{9} + \frac{1}{6}$

$$\frac{2}{3} + \frac{4}{9} + \frac{1}{6} = \frac{2 \times 6}{3 \times 6} + \frac{4 \times 2}{9 \times 2} + \frac{1 \times 3}{6 \times 3} = \frac{12}{18} + \frac{8}{18} + \frac{3}{18}$$

$$\frac{12}{18} + \frac{8}{18} + \frac{3}{18} = \frac{12+8+3}{18} = \frac{23}{18}$$

$$\begin{array}{r} 1 \\ 18 \overline{) 23} \\ \underline{-18} \\ 5 \end{array}$$

$$\boxed{1\frac{5}{18}}$$

6. $\frac{9}{10} - \frac{4}{5}$

$\frac{9}{10} = \frac{9 \times 1}{10 \times 1} = \frac{9}{10}$

$\frac{4}{5} = \frac{4 \times 2}{5 \times 2} = \frac{8}{10}$

$$\frac{9}{10} - \frac{8}{10} = \frac{9-8}{10} = \boxed{\frac{1}{10}}$$

7. $\frac{3}{4} - \frac{5}{10}$

$\frac{3}{4} = \frac{3 \times 5}{4 \times 5} = \frac{15}{20}$

$\frac{5}{10} = \frac{5 \times 2}{10 \times 2} = \frac{10}{20}$

$$\frac{15}{20} - \frac{10}{20} = \frac{5}{20}$$

$$\frac{5 \div 5}{20 \div 5} = \boxed{\frac{1}{4}}$$

8. $1\frac{1}{2} + 2\frac{5}{6}$

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

$2\frac{5}{6} = 2\frac{5}{6}$

$$\frac{2}{3} + \frac{17}{6} = \frac{2 \times 3}{3 \times 3} + \frac{17}{6} = \frac{6}{9} + \frac{17}{6} = \frac{17}{6}$$

$$\frac{9}{6} + \frac{17}{6} = \frac{26}{6}$$

$$\begin{array}{r} 4 \\ 6 \overline{) 26} \\ \underline{-24} \\ 2 \end{array}$$

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

9. $4 \frac{1}{3} - 1 \frac{1}{2}$

$$\frac{13}{3} - \frac{3}{2}$$

$$\frac{13}{3} = \frac{26}{6}$$

$$\frac{3}{2} = \frac{9}{6}$$

$$\frac{26}{6} - \frac{9}{6} = \frac{17}{6}$$

$$\begin{array}{r} 2 \\ 6 \overline{) 17} \\ \underline{-12} \\ 5 \end{array}$$

$$\boxed{2 \frac{5}{6}}$$

10. $8 - 3 \frac{5}{7} = 8 \frac{0}{7} - 3 \frac{5}{7}$

$$\frac{56}{7} - \frac{26}{7} = \frac{56-26}{7} = \frac{30}{7}$$

$$\begin{array}{r} 4 \\ 7 \overline{) 30} \\ \underline{-28} \\ 2 \end{array}$$

$$\boxed{4 \frac{2}{7}}$$