

Adding Fractions

Name

KEY

- Make sure you have a common denominator before you add.
- Add the **numerators only**. The denominator stays the same.
- Simplify all answers.
- Write answers as mixed numbers when possible.

$$\text{a.) } \frac{1}{6} \times 2 + \frac{5}{12}$$

$$= \frac{2}{12} + \frac{5}{12} = \boxed{\frac{7}{12}}$$

$$\text{b.) } \frac{2}{5} \times 2 + \frac{4}{10}$$

$$= \frac{4}{10} + \frac{4}{10} = \frac{8}{10} \div 2 = \boxed{\frac{4}{5}}$$

$$\text{c.) } \frac{4}{14} + \frac{2}{7} \times 2$$

$$= \frac{4}{14} + \frac{4}{14} = \frac{8}{14} \div 2 = \boxed{\frac{4}{7}}$$

$$\text{d.) } \frac{4}{5} \times 3 + \frac{6}{15}$$

$$= \frac{12}{15} + \frac{6}{15} = \frac{18}{15} = 1 \frac{3}{15} \div 3 = \boxed{1 \frac{1}{5}}$$

$$\text{e.) } \frac{7}{9} \times 2 + \frac{3}{18}$$

$$= \frac{14}{18} + \frac{3}{18} = \boxed{\frac{17}{18}}$$

$$\text{f.) } \frac{16}{9} + \frac{15}{9} = \frac{31}{9} = \boxed{3 \frac{4}{9}}$$

$$\text{g.) } \frac{22}{5} + \frac{12}{5} = \frac{34}{5} = \boxed{6 \frac{4}{5}}$$

$$\text{h.) } \frac{16}{30} + \frac{12}{15} \times 2$$

$$= \frac{16}{30} + \frac{24}{30} = \frac{40}{30} = 1 \frac{10}{30} \div 2 = 1 \frac{5}{15} \div 5 = \boxed{1 \frac{1}{3}}$$

Subtracting Fractions

Name _____

- Make sure you have a common denominator before you subtract.
- Subtract the **numerators only**. The denominator stays the same.
- Simplify all answers.
- Write answers as mixed numbers when possible.

$$\text{a.) } \frac{9}{3} - \frac{2}{3} = \frac{7}{3} = \boxed{2\frac{1}{3}}$$

$$\text{b.) } \frac{4}{5} \times \frac{2}{2} - \frac{5}{10}$$

$$= \frac{8}{10} - \frac{5}{10} = \boxed{\frac{3}{10}}$$

$$\text{c.) } \frac{3}{4} - \frac{1}{2} \times \frac{2}{2}$$
$$= \frac{3}{4} - \frac{2}{4} = \boxed{\frac{1}{4}}$$

$$\text{d.) } \frac{16}{8} - \frac{6}{8} = \frac{10}{8} = 1\frac{2}{8} = \boxed{1\frac{1}{4}}$$

$$\text{e.) } \frac{21}{9} - \frac{11}{9} = \frac{10}{9} = \boxed{1\frac{1}{9}}$$

$$\text{f.) } \frac{8}{10} - \frac{1}{2} \times \frac{5}{5}$$

$$= \frac{8}{10} - \frac{5}{10} = \boxed{\frac{3}{10}}$$

$$\text{g.) } \frac{2}{3} \times \frac{2}{2} - \frac{1}{6}$$

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

$$\text{h.) } \frac{25}{30} - \frac{10}{15} \times \frac{2}{2}$$

$$= \frac{25}{30} - \frac{20}{30} = \frac{5}{30} \div 5 = \boxed{\frac{1}{6}}$$

Adding AND Subtracting Fractions (Mixed Numbers, too!)

Change mixed numbers to improper fractions before you find a common denominator.

Write all answers as mixed numbers (when possible) in simplest form.

$$\begin{aligned} \text{a.) } & \frac{1}{4} \times \frac{3}{3} + \frac{2}{3} \times \frac{4}{4} \\ & = \frac{3}{12} + \frac{8}{12} = \boxed{\frac{11}{12}} \end{aligned}$$

$$\begin{aligned} \text{b.) } & \frac{2}{5} \times \frac{2}{2} + \frac{1}{2} \times \frac{5}{5} \\ & = \frac{4}{10} + \frac{5}{10} = \boxed{\frac{9}{10}} \end{aligned}$$

$$\begin{aligned} \text{c.) } & \frac{3}{5} \times \frac{2}{2} - \frac{1}{2} \times \frac{5}{5} \\ & = \frac{6}{10} - \frac{5}{10} = \boxed{\frac{1}{10}} \end{aligned}$$

$$\begin{aligned} \text{d.) } & \frac{3}{4} \times \frac{5}{5} - \frac{2}{5} \times \frac{4}{4} \\ & = \frac{15}{20} - \frac{8}{20} = \boxed{\frac{7}{20}} \end{aligned}$$

$$\begin{aligned} \text{e.) } & 2\frac{5}{9} - 1\frac{1}{9} \\ & \quad \downarrow \quad \quad \downarrow \\ & \frac{23}{9} - \frac{10}{9} \\ & = \frac{13}{9} = \boxed{1\frac{4}{9}} \end{aligned}$$

$$\begin{aligned} \text{f.) } & 2\frac{7}{8} - 1\frac{1}{2} \\ & \quad \downarrow \quad \quad \downarrow \\ & \frac{23}{8} - \frac{3 \times 4}{2 \times 4} \\ & = \frac{23}{8} - \frac{12}{8} = \frac{11}{8} = \boxed{1\frac{3}{8}} \end{aligned}$$

$$\begin{aligned} \text{g.) } & 1\frac{1}{9} + 1\frac{2}{6} \\ & \quad \downarrow \quad \quad \downarrow \\ & \frac{10 \times 2}{9 \times 2} + \frac{8 \times 3}{6 \times 3} \\ & = \frac{20}{18} + \frac{24}{18} = \frac{44}{18} = 2\frac{8}{18} \div 2 \\ & = \boxed{2\frac{4}{9}} \end{aligned}$$

$$\begin{aligned} \text{h.) } & 2\frac{6}{7} - 1\frac{1}{3} \\ & \quad \downarrow \\ & \frac{20 \times 3}{7 \times 3} - \frac{4 \times 7}{3 \times 7} \\ & = \frac{60}{21} - \frac{28}{21} = \frac{32}{21} = \boxed{1\frac{11}{21}} \end{aligned}$$