Study the following.

To solve problems with mixed fractions, a foolproof way is to change the fractions to improper fractions, and then solve as usual.

Addition/Subtraction examples:

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

$\frac{5}{2} + \frac{4}{3} =$ change to improper fractions

$\frac{5}{2} \times \boxed{\frac{3}{3}} = \frac{15}{6}$ $\frac{4}{3} \times \boxed{\frac{2}{2}} = \frac{8}{6}$ change to the same denominator

$\frac{15}{6} + \frac{8}{6} = \frac{23}{6}$ add, then change to a mixed fraction

answer $3\ \frac{5}{6}$

Solve.

1. $3\ ¼ + 1\ ½ =$

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

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

4. $3\ \frac{1}{8} - 1\ \frac{1}{4} =$

Study the following.

Multiplication example.

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

$\frac{5}{2} \times \frac{11}{3} =$ change to improper fractions

$\frac{5}{2} \times \frac{11}{3} = \frac{55}{6}$ Multiply, then change to a mixed fraction

answer $9\ \frac{1}{6}$

Division example.

$1\ \frac{1}{4} \div 2\ \frac{1}{5} =$

$\frac{5}{4} \div \frac{11}{5} =$ change to improper fractions

$\frac{5}{4} \times \frac{5}{11} = \frac{25}{44}$ Divide by multiplying by the reciprocal.

answer $\frac{25}{44}$

Solve.

1. $2\ \frac{1}{4} \times 1\ \frac{1}{2} =$

2. $3\ \frac{1}{2} \div 1\ \frac{1}{3} =$

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

4. $3\ \frac{2}{3} \div 1\ \frac{1}{4} =$

Study the following.

It is sometimes easier and quicker to add fractions like this.

$$\begin{array}{rrr} & 8 & \frac{1}{4} \\ + & 4 & \frac{1}{4} \\ \hline & 12 & \frac{2}{4} \end{array}$$

add 8 + 4 add ¼ and ¼

Reduce the 2/4 to ½ and the answer is 12 ½.

Another example.

$$\begin{array}{rrr} & 8 & \frac{3}{4} \\ + & 4 & \frac{3}{4} \\ \hline & 12 & \frac{6}{4} \end{array}$$

add 8 + 4 add 3/4 and 3/4

Reduce the 6/4 to 3/2. Then change it it a mixed fraction 1 ½.

12 and 1 ½ are put together by adding the 12 and the 1.

13 ½ is the answer.

Solve.

1.

$$\begin{array}{rrr} & 3 & \frac{1}{3} \\ + & 6 & \frac{1}{3} \\ \hline \end{array}$$

2.

$$\begin{array}{rrr} & 7 & \frac{2}{3} \\ + & 2 & \frac{2}{3} \\ \hline \end{array}$$

3.

$$\begin{array}{rrr} & 8 & \frac{2}{3} \\ + & 6 & \frac{2}{3} \\ \hline \end{array}$$

4.

$$\begin{array}{rrr} & 5 & \frac{4}{5} \\ + & 2 & \frac{3}{5} \\ \hline \end{array}$$