

Name _____

Date _____

Adding, Subtracting, and Simplifying Fractions

In this worksheet, we will practice adding, subtracting, and simplifying fractions. When fractions have the same bottom number (denominator), we only have to add the two top numbers (numerators), and keep the denominator the same. For example, $3/12 + 4/12 = 7/12$. However, when the denominators are different, an extra step has to be taken. Both denominators need to be made the same. With $3/4$ and $3/6$, the smallest number that both 4 and 6 can fit into is 12, so the new denominator is 12. Then, the nominator (number above the line) and denominator need to be multiplied by the number that makes the denominator equal 12. See the examples below.

Adding fractions ex:

$$3/4 + 3/6 = ?$$

$$\begin{array}{r} \underline{3} \times 3 = \underline{9} \\ 4 \times 3 = 12 \end{array}$$

$$\begin{array}{r} \underline{3} \times 2 = \underline{6} \\ 6 \times 2 = 12 \end{array}$$

$$9/12 + 6/12 = 15/12$$

$$\text{Simplified, } 15/12 = 1 \frac{3}{12} = 1 \frac{1}{4}$$

Subtracting fractions ex:

$$7/8 - 2/4 = ?$$

$$\begin{array}{r} \underline{7} \\ 8 \end{array} \qquad \begin{array}{r} \underline{2} \times 2 = 4 \\ 4 \times 2 = 8 \end{array}$$

$$1/8 - 4/8 = 3/8$$

(Remember, when the numerator and denominator are equal, the fraction equals 1. (Ex: $3/3$, $6/6$, $12/12$, $20/20$ all equal 1).

Exercise Questions:

1. Add the fractions below.
Simplify if possible.

$$1/2 + 1/6 = \underline{\hspace{2cm}}$$

2. Add the fractions below.
Simplify if possible.

$$1/4 + 3/8 = \underline{\hspace{2cm}}$$

3. Add the fractions below.
Simplify if possible.

$$2/6 + 2/8 = \underline{\hspace{2cm}}$$

4. Subtract the fractions below.
Simplify if possible.

$$6/8 - 4/6 = \underline{\hspace{2cm}}$$

5. Subtract the fractions below.
Simplify if possible.

$$9/10 - 5/6 = \underline{\hspace{2cm}}$$

6. Subtract the fractions below.
Simplify if possible.

$$8/12 - 4/10 = \underline{\hspace{2cm}}$$



Answer Key

Adding, Subtracting, and Simplifying Fractions

In this worksheet, we will practice adding, subtracting, and simplifying fractions. When fractions have the same bottom number (denominator), we only have to add the two top numbers (numerators), and keep the denominator the same. For example, $\frac{3}{12} + \frac{4}{12} = \frac{7}{12}$. However, when the denominators are different, an extra step has to be taken. Both denominators need to be made the same. With $\frac{3}{4}$ and $\frac{3}{6}$, the smallest number that both 4 and 6 can fit into is 12, so the new denominator is 12. Then, the numerator (number above the line) and denominator need to be multiplied by the number that makes the denominator equal 12. See the examples below.

Adding fractions ex:

$$\frac{3}{4} + \frac{3}{6} = ?$$

$$\begin{array}{l} \underline{3} \times 3 = \underline{9} \\ 4 \times 3 = 12 \end{array}$$

$$\begin{array}{l} \underline{3} \times 2 = \underline{6} \\ 6 \times 2 = 12 \end{array}$$

$$\frac{9}{12} + \frac{6}{12} = \frac{15}{12}$$

$$\text{Simplified, } \frac{15}{12} = 1 \frac{3}{12} = 1 \frac{1}{4}$$

Subtracting fractions ex:

$$\frac{7}{8} - \frac{2}{4} = ?$$

$$\begin{array}{l} \underline{7} \\ 8 \end{array} \quad \begin{array}{l} \underline{2} \times 2 = 4 \\ 4 \times 2 = 8 \end{array}$$

$$\frac{7}{8} - \frac{4}{8} = \frac{3}{8}$$

(Remember, when the numerator and denominator are equal, the fraction equals 1. (Ex: $\frac{3}{3}$, $\frac{6}{6}$, $\frac{12}{12}$, $\frac{20}{20}$ all equal 1).

Exercise Questions:

1. Add the fractions below.
Simplify if possible.

$$\frac{1}{2} + \frac{1}{6} = \underline{\frac{4}{6} = \frac{2}{3}}$$

2. Add the fractions below.
Simplify if possible.

$$\frac{1}{4} + \frac{3}{8} = \underline{\frac{5}{8}}$$

3. Add the fractions below.
Simplify if possible.

$$\frac{2}{6} + \frac{2}{8} = \underline{\frac{14}{24} = \frac{7}{12}}$$

4. Subtract the fractions below.
Simplify if possible.

$$\frac{6}{8} - \frac{4}{6} = \underline{\frac{2}{14} = \frac{1}{12}}$$

5. Subtract the fractions below.
Simplify if possible.

$$\frac{9}{10} - \frac{5}{6} = \underline{\frac{2}{30} = \frac{1}{15}}$$

6. Subtract the fractions below.
Simplify if possible.

$$\frac{8}{12} - \frac{4}{10} = \underline{\frac{16}{60} = \frac{4}{15}}$$

