

5.5

Using Symbols to Subtract Fractions



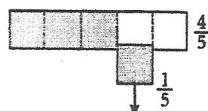
Quick Review

The strategies for subtracting fractions are similar to those for adding fractions.

- If the denominators are the same, subtract the numerators. Then write the difference over the common denominator.

4 fifths - 1 fifth = 3 fifths

$$\frac{4}{5} - \frac{1}{5} = \frac{3}{5}$$



- If the denominators are different, subtract equivalent fractions with the same denominator.

To subtract $\frac{1}{2} - \frac{1}{8}$, find the lowest common multiple of 2 and 8.

Multiples of 2 are: 2, 4, 6, 8, 10, 12, ...

Multiples of 8 are: 8, 16, 24, ...

The lowest common multiple of 2 and 8 is 8.

Write equivalent fractions using 8 as the denominator.

$$\frac{1}{2} \xrightarrow{\times 4} \frac{4}{8} = \frac{4}{8}$$

$$\text{So, } \frac{1}{2} - \frac{1}{8} = \frac{4}{8} - \frac{1}{8} = \frac{3}{8}$$

Tip

Since 8 is a multiple of 2, 8 is the lowest common multiple of 2 and 8.

Practice

1. Subtract.

a) $\frac{7}{8} - \frac{3}{8} =$ _____

b) $\frac{3}{5} - \frac{1}{5} =$ _____

c) $\frac{9}{10} - \frac{2}{10} =$ _____

d) $\frac{8}{9} - \frac{2}{9} =$ _____

e) $\frac{6}{7} - \frac{1}{7} =$ _____

f) $\frac{11}{12} - \frac{3}{12} =$ _____

2. Subtract.

a) $\frac{3}{4} - \frac{1}{12}$

The multiples of 4 are: _____

The multiples of 12 are: _____

A multiple of 4 and 12 is: _____

Use this as a common denominator.

$$\begin{aligned}\frac{3}{4} - \frac{1}{12} &= \underline{\hspace{2cm}} \\ &= \underline{\hspace{2cm}}\end{aligned}$$

b) $\frac{2}{3} - \frac{2}{10}$

The multiples of 3 are: _____

The multiples of 10 are: _____

A multiple of 3 and 10, and a common denominator is: _____

$$\begin{aligned}\frac{2}{3} - \frac{2}{10} &= \underline{\hspace{2cm}} \\ &= \underline{\hspace{2cm}}\end{aligned}$$

c) $\frac{3}{4} - \frac{3}{10}$

Multiples of 4 are: _____

Multiples of 10 are: _____

A multiple of 4 and 10, and a common denominator is: _____

$$\begin{aligned}\frac{3}{4} - \frac{3}{10} &= \underline{\hspace{2cm}} \\ &= \underline{\hspace{2cm}}\end{aligned}$$

d) $\frac{3}{2} - \frac{7}{10}$

The multiples of 2 are: _____

The multiples of 10 are: _____

A multiple of 2 and 10, and a common denominator is: _____

$$\begin{aligned}\frac{3}{2} - \frac{7}{10} &= \underline{\hspace{2cm}} \\ &= \underline{\hspace{2cm}}\end{aligned}$$

3. Subtract: $\frac{4}{9} - \frac{1}{3}$

The lowest common multiple of 9 and 3 is: _____

$$\frac{4}{9} - \frac{1}{3} = \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

4. Subtract. Write the answer in simplest form.

a) $\frac{5}{8} - \frac{1}{6} = \underline{\hspace{2cm}}$

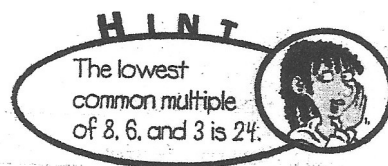
b) $\frac{2}{3} - \frac{5}{12} = \underline{\hspace{2cm}}$

c) $\frac{5}{7} - \frac{2}{5} = \underline{\hspace{2cm}}$

d) $\frac{2}{5} - \frac{1}{6} = \underline{\hspace{2cm}}$

5. Complete this magic square so that the sum of every row, column, and diagonal is 1.
Write all fractions in simplest form.

$\frac{3}{8}$	$\frac{1}{6}$	
	$\frac{1}{3}$	



6. Jie weeds $\frac{2}{5}$ of her garden on Friday, and $\frac{1}{3}$ on Saturday.

How much of the garden still needs to be weeded?
