SUBTRACTING FRACTIONS

The Rule for addition is basically follows the same rules as for addition.

The key is to make sure the "**denominators are the same**!"

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- Change each fraction so that the denominators of each fraction are equal.

  (If you can't remember how to… look at equivalent fractions)

- Subtract the numerators of the fractions.
- The denominator of the answer will be the common denominator.
- Reduce or simplify the answer, if needed.

Remember: **Do Not subtract** denominators.

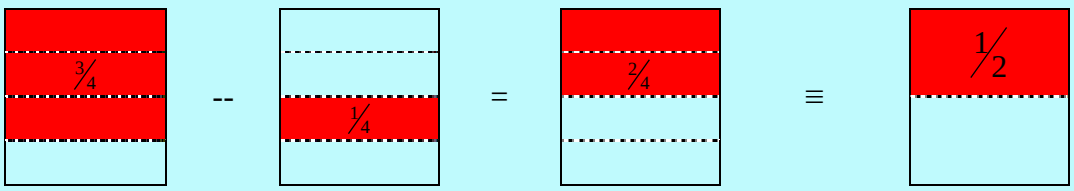
If you want to subtract fractions with the **same denominator**, then just subtract numerators and keep the denominator unchanged.

Changing mixed fractions to improper fractions would be one of the best approaches.

Let's check some examples

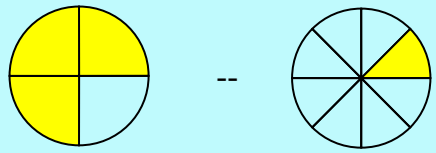
Example 1

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



Example 2

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



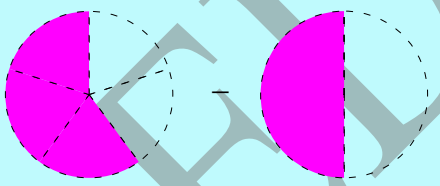
Common denominator

$$=\frac{3\times 2}{4\times 2}-\frac{1}{8}$$

$$=\frac{6}{8}-\frac{1}{8}=\frac{5}{8}$$

Example 3

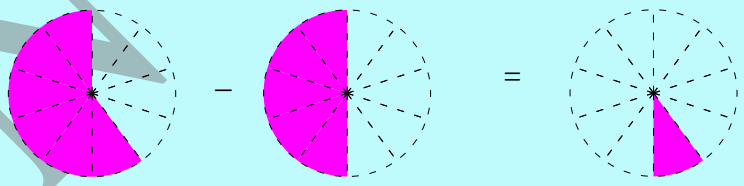
$$\frac{3}{5}-\frac{1}{2}$$



Common denominator

$$=\frac{3\times 2}{5\times 2}-\frac{1\times 5}{2\times 5}=\frac{6}{10}-\frac{5}{10}$$

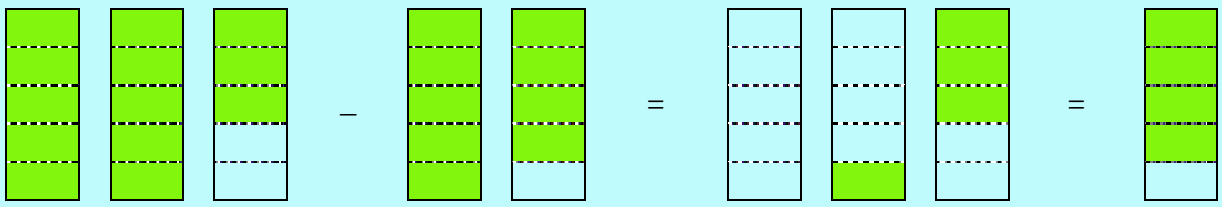
$$=\frac{6-5}{10}=\frac{1}{10}$$



Example 4

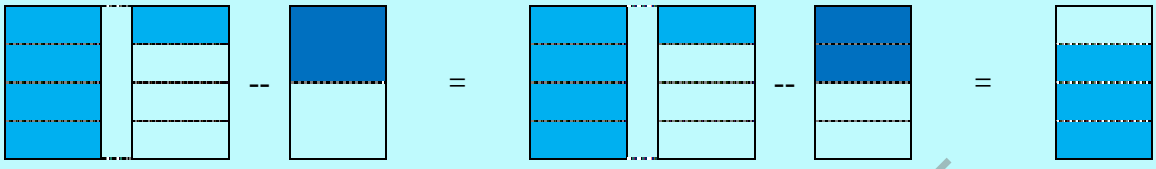
Improper fractions

$$2\frac{3}{5} \quad - \quad 1\frac{4}{5} \quad = \quad \frac{13}{5}-\frac{9}{5} \quad = \frac{13-9}{5} \quad = \frac{4}{5}$$



Example 5

$$1\frac{1}{4}-\frac{1}{2} \quad =\frac{5}{4}-\frac{1}{2} \quad =\frac{5}{4}-\frac{2\times1}{2\times2} \quad =\frac{5}{4}-\frac{2}{4} \quad =\frac{5-2}{4} \quad =\frac{3}{4}$$



Example 6

$$\frac{7}{9}-\frac{5}{9} \quad =\frac{7-5}{9} \quad =\frac{2}{9}$$

Example 7

$$\frac{7}{10}-\frac{5}{20} \quad =\frac{2\times7}{2\times10}-\frac{5}{20} \quad =\frac{14}{20}-\frac{5}{20} \quad =\frac{14-5}{20} \quad =\frac{9}{20}$$

Example 8

$$\frac{5}{6}-\frac{1}{4} \quad =\frac{2\times5}{2\times6}-\frac{3\times1}{3\times4} \quad =\frac{10}{12}-\frac{3}{12} \quad =\frac{10-3}{12} \quad =\frac{7}{12}$$

Example 9

$$3\frac{5}{8}-1\frac{7}{8}$$

$$\Downarrow$$

$\downarrow$ improper fractions

$$=\frac{29}{8}-\frac{15}{8} \quad =\frac{29-15}{8} \quad =\frac{14}{8} \xrightarrow{\text{reduce/simplify}} \frac{7}{4} \xrightarrow{\text{mixed number}} 1\frac{3}{4}$$

Now try to answer questions in subtraction worksheet.