Introduction to Fraction Operations

<u>Math Links</u> **textbook**
Section 6.2 Adding Fractions with Like Denominators ~ Pages 214-216
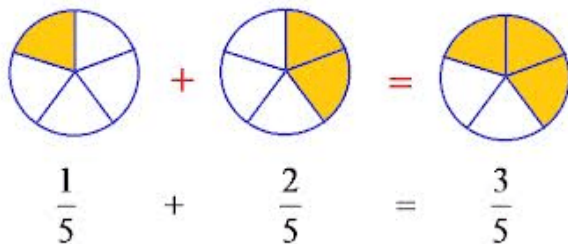Section 6.3 Subtracting Fractions with Like Denominators ~ Pages 220-221

How do I add fractions with like-denominators?

· Adding fractions is different from adding whole numbers because a fraction is only part of a number.

· Adding fractions is easy when the denominators are the same.

· To add fractions with like-denominators you simply **ADD THE NUMERATORS** together. The **DENOMINATOR ALWAYS STAYS THE SAME**. The denominator simply gets carried forward.

For example:

NUMERATOR: How many parts are shaded altogether? There are 3 shaded parts.
DENOMINATOR: How many parts are there altogether? There are five parts.

$$\frac{1}{5} \quad + \quad \frac{2}{5} \quad = \quad \frac{3}{5}$$

For example: 2 chocolate bars are divided into 4 sections. Shade each chocolate bar according to its fractional parts. Then add both parts together.

$$\frac{1}{4}$$

$$\frac{2}{4}$$ What are the total parts shaded? _____

<u>Reminder</u>**:**

Fractions Equivalent to 1 - If the numerator and the denominator are the same number, the fraction equals 1. For example: $\frac{5}{5}$ = 1 whole
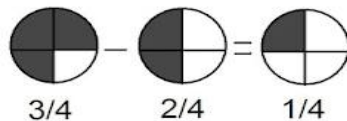
How do I subtract fractions with like-denominators?

You subtract fractions with like-denominators the same way you add them. The only difference is that you **SUBTRACT THE NUMERATORS** from one another. The **DENOMINATORS ALWAYS REMAIN THE SAME**.

3/4   2/4   1/4

After I add or subtract the fractions, how do I reduce or simplify the fraction to lowest terms?

Sometimes you will be asked to add or subtract and write your answer in lowest terms.

$$\frac{7}{12} - \frac{1}{12} = ?$$

Subtract the top numbers and put the answer over the same denominator

$$\frac{7}{12} - \frac{1}{12} = \frac{7-1}{12} = \frac{6}{12} = \frac{1}{2}$$

Same Denominator

Simplify the fraction

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For example:

$$\frac{25}{30} - \frac{18}{30} = \frac{7}{30}$$

Other times you will get lucky and you won't have to reduce!

Let's try a few together!

Fractions	Add/Subtract	Answer	Reduced Answer
$\frac{7}{10} + \frac{1}{10}$			
$\frac{1}{8} + \frac{5}{8}$			
$\frac{5}{6} - \frac{1}{6}$			
$\frac{7}{12} - \frac{1}{12}$			