

FRACTIONS - Addition & Subtraction



↳ example 1:

$$a) \frac{3}{2} + \frac{2}{2} =$$

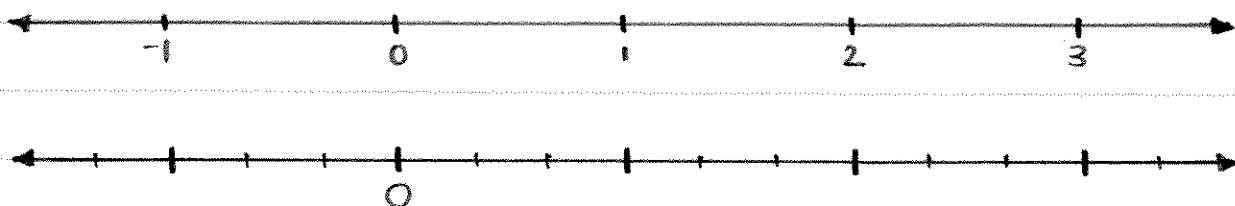
Note: Since both terms are "LIKE TERMS"
we can add them.

$$b) \frac{3}{2} - \frac{5}{2}$$

$$c) \frac{5}{2} - \frac{1}{2}$$

Note: $\frac{2}{3}$ ← this number is known as the
NUMERATOR
⇒ how many thirds you have
↑
this number is known as the
DENOMINATOR
⇒ identifies the type of fraction
{in this case, thirds}

We can divide our number line into thirds:



↳ example 2:

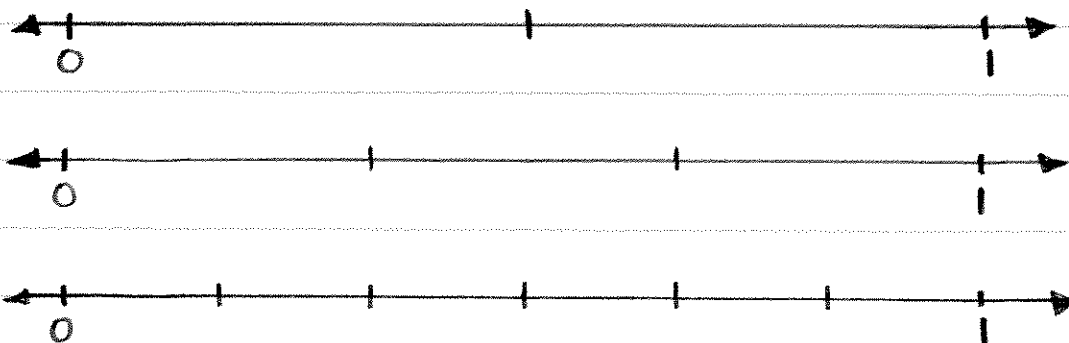
$$\begin{aligned} \text{a) } & 5 - 7 + 3 \\ & = \underline{\quad} + 3 \\ & = \underline{\quad} \end{aligned}$$

$$\begin{aligned} \text{b) } & \frac{5}{3} - \frac{7}{3} + \frac{3}{3} \\ & = \\ & = \end{aligned}$$

$$\begin{aligned} \text{c) } & \frac{2}{3} + \frac{5}{3} - \frac{4}{3} \\ & = \\ & = \end{aligned}$$

what about $\frac{1}{2} + \frac{1}{3}$?

These are not like terms so we cannot add them until we make them into like terms.



$$\frac{1}{2} = \frac{\quad}{6} \quad \text{and} \quad \frac{1}{3} = \frac{\quad}{6}$$

therefore,

$$\begin{aligned} \frac{1}{2} + \frac{1}{3} \\ &= \frac{\quad}{6} + \frac{\quad}{6} \\ &= \frac{\quad}{6} \end{aligned}$$

When adding or subtracting fractions, we must find the _____ or LCD for short.

The LCD of two fractions is the smallest positive number that is divisible by BOTH denominators.

How do we compute $\frac{1}{2} + \frac{1}{3}$ without a number line?

We must first identify the LCD.
LCD = _____

Recall: multiplying any number by 1 does not change the number.

$$\frac{1}{2} \left(\quad \right) = \frac{\quad}{6}$$

$$\frac{1}{3} \left(\quad \right) = \frac{\quad}{6}$$

$$\text{So } \frac{1}{2} + \frac{1}{3} = \frac{\quad}{6} + \frac{\quad}{6} = \frac{\quad}{6}$$

↳ example 3:

$$\frac{1}{2} + \frac{1}{3} + \frac{1}{4}$$

The LCD is _____ since 2, 3 AND 4
all go into it evenly.

We must rewrite our fractions to
make them LIKE TERMS

$$\frac{1}{2}(\quad) + \frac{1}{3}(\quad) + \frac{1}{4}(\quad)$$

$$= \frac{\quad}{12} + \frac{\quad}{12} + \frac{\quad}{12}$$

=

↳ example 4:

$$\frac{5}{6} - \frac{2}{3} + \frac{7}{4}$$

LCD = _____

↳ example 5:

Reduce each fraction to lowest terms

a) $\frac{6}{8}$

b) $\frac{12}{9}$

c) $\frac{100}{28}$

↳ example 6:

a) write $\frac{2}{3}$ as an equivalent

fraction with a denominator of 6.

b) write $\frac{1}{5}$ as an equivalent

fraction with a denominator of 10x

FRACTIONS - Addition & Subtraction Practice Problems

1. $\frac{1}{2} + \frac{5}{2}$

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

3. $\frac{4}{3} - \frac{2}{3} + \frac{5}{3}$

4. $\frac{1}{3} + \frac{1}{5}$

5. Reduce each fraction

a) $\frac{4}{8} =$

b) $\frac{15}{3} =$

c) $\frac{21}{7} =$