

Maths for Computing 1

Example 1

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

To add or subtract fractions they need to be of the same denomination

e.g. $\frac{1}{7} + \frac{2}{7} = \frac{3}{7}$

If you multiply the top and bottom numbers of a fraction by the same amount the value is unchanged.

i.e. $\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$ etc.,

So convert the fractions in (a) to 15ths as this is the lowest common multiple (LCM) of 3 and 5. Then $\frac{1}{3}$ becomes $\frac{5}{15}$ and $\frac{1}{5}$ becomes $\frac{3}{15}$. Now we have:

$$\frac{1}{3} + \frac{1}{5} = \frac{5}{15} + \frac{3}{15} = \frac{8}{15} \quad \text{job done!}$$

Now try these:

- 1) $\frac{2}{3} + \frac{3}{5}$
- 2) $\frac{3}{4} - \frac{1}{3}$
- 3) $\frac{1}{4} + \frac{1}{3} - \frac{1}{2}$

Example 2

$\frac{1}{3}$ multiplied by $\frac{1}{5}$

Multiplying is straightforward. Just multiply the top across and the bottom across.

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

Now try these:

- 1) $\frac{1}{3} \times \frac{1}{5}$
- 2) $\frac{1}{4} \times \frac{1}{6}$
- 3) $\frac{1}{2} \times 4$
- 4) $\frac{3}{5} \times \frac{5}{4}$

Example 3

$\frac{1}{3}$ divided by $\frac{1}{5}$

Invert the divisor and multiply

Eg. $\frac{1}{3} \div \frac{1}{5} = \frac{1}{3} \times \frac{5}{1} = \frac{5}{3}$

Now try these:

1) $\frac{3}{5} \div \frac{1}{5}$

2) $\frac{6}{7} \div \frac{3}{4}$

3) $\frac{1}{2} \div \frac{1}{4}$

END