

# 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)  $\frac{2}{3} + \frac{3}{5} = \frac{19}{15} = 1 \frac{4}{15}$

2)  $\frac{3}{4} - \frac{1}{3} = \frac{5}{12}$

3)  $\frac{1}{4} + \frac{1}{3} - \frac{1}{2} = \frac{1}{12}$

## 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)  $\frac{1}{3} \times \frac{1}{5} = \frac{1}{15}$

2)  $\frac{1}{4} \times \frac{1}{6} = \frac{1}{24}$

3)  $\frac{1}{2} \times 4 = 2$

4)  $\frac{3}{5} \times \frac{5}{4} = \frac{3}{4}$

## 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)  $3/5 \div 1/5 = 3$

2)  $6/7 \div 3/4 = 24/21 = 1 \frac{1}{7}$

3)  $1/2 \div 1/4 = 2$

**END**