

# 6: Fractions

## Rules:

### 1. Addition/Subtraction

$$1. \frac{10}{7} + \frac{2}{7} = \frac{12}{7}$$

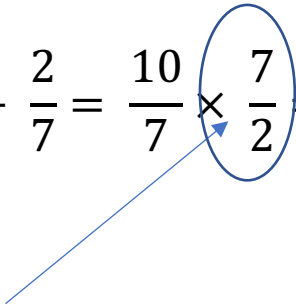
2. If denominators are not the same

$$\frac{10}{7} + \frac{2}{5} = \frac{\cancel{10}^{\text{blue}}}{\cancel{7}^{\text{blue}}} + \frac{\cancel{2}^{\text{blue}}}{\cancel{5}^{\text{blue}}} = \frac{50}{35} + \frac{14}{35} = \frac{64}{35}$$

### 2. Multiply

$$\frac{10}{7} \times \frac{2}{7} = \frac{20}{49}$$

### 3.Division

$$\frac{10}{7} \div \frac{2}{7} = \frac{10}{7} \times \frac{7}{2} = \frac{70}{14}$$


Change from  $\times$  to  $\div$  by switch  
nominator with denominator

## 6: Recurring Decimal:

### 1. Change 0.7777777... to fraction?

Set X to recurring decimal  $\longrightarrow x = 0.\dot{7}$

Try to eliminate recurring  $\longrightarrow 10x = 7.\dot{7}$

Bring one loop of recurring decimal to before dot

$$10x - x = 7.\dot{7} - 0.\dot{7}$$

$$9x = 7$$

rearrange  $\longrightarrow x = \frac{7}{9}$

## 2. Change 1.256565656.. to fraction?

Set X to recurring decimal  $\longrightarrow x = 1.2\dot{5}\dot{6}$

Try to eliminate recurring  $\longrightarrow 10x = 12.\dot{5}\dot{6}$

Bring one loop of recurring decimal to before dot

$$1000x = 1256.\dot{5}\dot{6}$$

$$1000x - 10x = 1256.\dot{5}\dot{6} - 12.\dot{5}\dot{6}$$

$$990x = 1244$$

rearrange  $\longrightarrow x = \frac{1244}{990}$