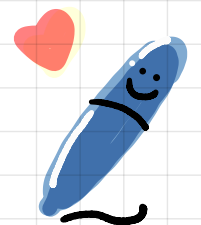


# 1.5) Ratio and Proportion



## Reducing Ratios (Simplest Form)

Example: Write the ratio  $12 : 20$  in its simplest form.

Calculator

Example: Simplify the ratio  $1.2 : 3.6$

Calculator

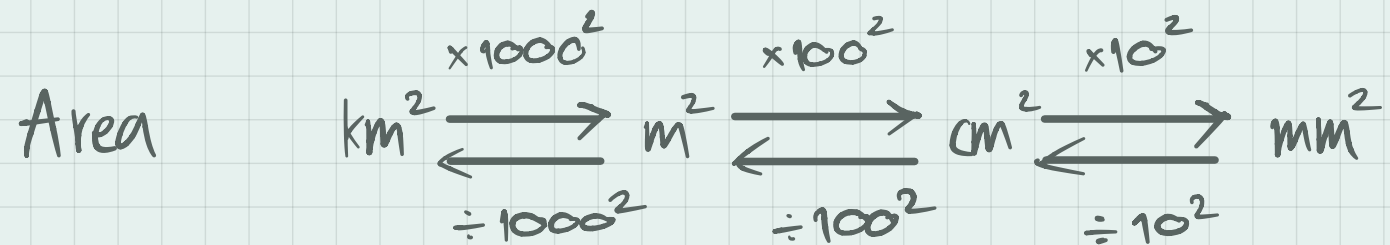
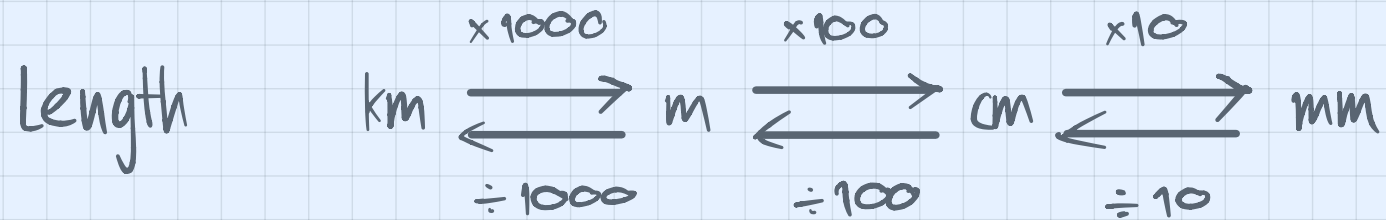
# Numbers: Ratio and Proportion

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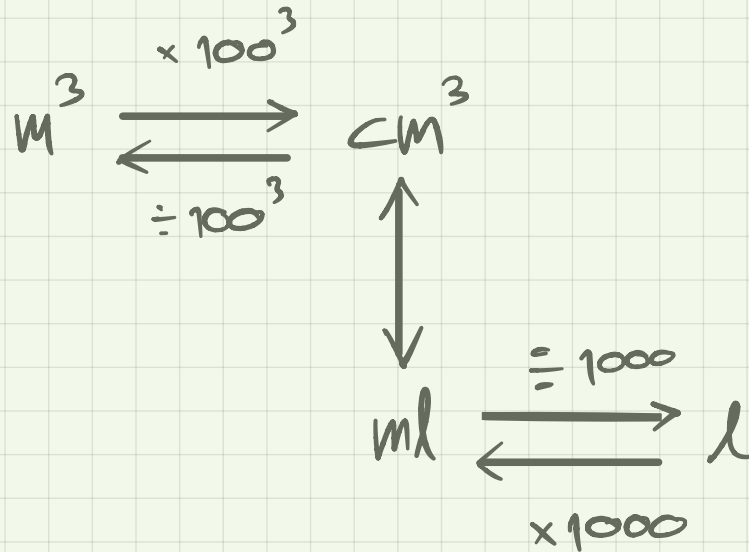
Example: Give the ratio  $\frac{5}{3} : \frac{7}{2}$  in its simplest form.

Calculator

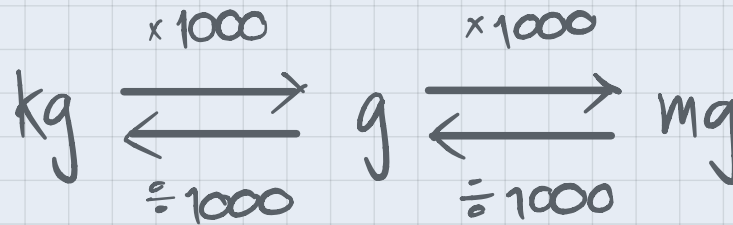
## Review : Units



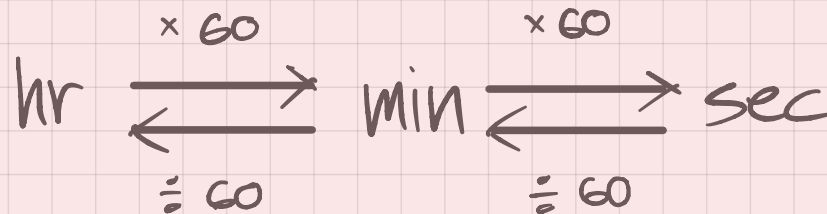
Volume



Mass



Time



# Numbers: Ratio and Proportion

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Example: Reduce the ratio 24 mm : 7.2 cm to its simplest form.

Example: Reduce  $3 : 72$  to the form  $1 : n$

Example: Reduce  $4 : 3$  to the form  $n : 1$

## Problem Solving

Example: J and P share some money in ratio 5 : 7

(i) J receives \$240. Find P receives.

(ii) Total money is \$480. Find J and P receives.

(iii) The difference between money of J and P is \$120. Find total money.

# Numbers: Ratio and Proportion

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**Example: The age of A, B and C are in the ratio  $3 : 7 : 8$**

**C is 20 years older than A. How old is B?**

## Maps and Scale

Scale  $\rightarrow$  1 :

Example: Scale 1 cm : 5 km

Example: Scale 1 : 2000

# Numbers: Ratio and Proportion

TOP Maths IGCSE

**Example: Distance between A and B on map is 3.2 cm. Find real distance for km between A and B for scale 1:200000**

# Numbers: Ratio and Proportion

TOP Maths IGCSE

Example: A and B are 2.25 km apart. How far apart would they be on a map with a scale 1 cm:500m

**Proportion** → Finding the value of a unit quantity.

**Direct Proportion**

**Example:** Five cans of cola cost \$1.45. Find the cost of seven cans.

# Numbers: Ratio and Proportion

TOP Maths IGCSE

Example: The cost of a phone call 3 min 30 sec was 66.5 cents

At this rate, what was the cost of a call 5 min?

## Inverse Proportion

Example : Four people build a wall in 15 days. How long would it take five people?

**Example: A ship has sufficient food to supply 500 passengers for 4 weeks.**

**How long would the food last for 80 passengers?**