Guide to:
Conversions and units

maths Links

Explanation:

Know the essential metric conversions by heart: **1 cm = 10 mm**, **1 m = 100 cm**, **1 km = 1000 m**, **1 kg = 1000 g**, **1 tonne = 1000 kg**, and **1 litre = 1000 ml = 1000 cm³**. Multiply when changing from a larger unit to a smaller unit; divide when changing from a smaller unit to a larger unit.

For **time**, remember there are **60 minutes in 1 hour** (so 0.25 hours = 15 mins, 0.5 hours = 30 mins, 0.75 hours = 45 mins). For **area and volume** conversions, square or cube the length conversion factor (e.g. **1 m² = 100² cm² = 10,000 cm²**).

Example 1: Convert:
(a) **3.45 kg** into grams
(b) **2 hours 24 minutes** into hours (as a decimal)

Solution:

(a) 3.45 × 1000 = **3450 g**

(b) 24 mins = $\frac{24}{60}$ hrs = 0.4 hours

2 + 0.4 = **2.4 hours**

Answer: (a) 3450 g (b) 2.4 hours

Example 2: Convert **4.5 m²** into **cm²**.

Solution:

Length conversion: 1 m = 100 cm

Area conversion: 1 m² = 100 × 100 = **10,000 cm²**

4.5 × 10,000 = 45,000 cm²

Answer: 45,000 cm²

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