Guide to: Scale drawings

maths Links

Explanation:

A scale drawing shows a real object reduced in size using a fixed ratio. A scale may be given with units (e.g. **1 cm represents 5 m**) or as a unitless ratio (e.g. **1 : 500**, which means **1 cm on the drawing = 500 cm in real life**).

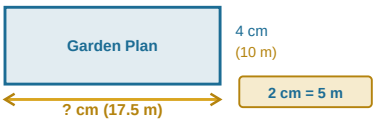
To find a **real-life length**, measure the drawing length in cm and **multiply** by the scale. To find a **drawing length**, **divide** the real-life length by the scale (converting to matching units first if needed).

Example 1: A map has a scale of **1 : 25,000**. Two villages are **6 cm** apart on the map. Find the real distance in **km**.



Real distance = 6 × 25,000 = **150,000 cm**
150,000 ÷ 100 = **1500 m** = **1.5 km**

Example 2: A plan uses a scale of **2 cm to 5 m**. A rectangular garden is **17.5 m** long by **10 m** wide. Find its length on the plan.



Scale for 1 cm: 5 m ÷ 2 = **2.5 m per 1 cm**
Plan length = 17.5 ÷ 2.5 = **7 cm**

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