

Mastering Measurement with Max the Monkey

Learning objective: To consolidate understanding of converting between units, calculating perimeter and area, and solving multi-step problems involving volume and capacity.

Use these flashcards to test your knowledge of measurement. Read the question on the front, think of your answer, then check the back to see if you have mastered the concept. Use Max the Monkey's tips to help you calculate accurately.

How many metres are in 4.5 kilometres?

4500 metres (multiply by 1000).

Define 'Perimeter' and explain how to calculate it for a regular pentagon with 6cm sides.

Perimeter is the total distance around the outside of a 2D shape. $6\text{cm} \times 5 = 30\text{cm}$.

If a rectangle has an area of 48cm^2 and a length of 8cm, what is its width?

6cm ($\text{Area} \div \text{length} = \text{width}$).

How many millilitres are in 2.75 litres?

2750ml (multiply by 1000).

What is the formula for calculating the volume of a cuboid?

$\text{Length} \times \text{Width} \times \text{Height}$.

Max has a container holding 1500ml of water. If he pours out 0.75 litres, how much is left in millilitres?

750ml ($1500\text{ml} - 750\text{ml}$).

Compare and contrast 'Capacity' and 'Volume'.

Volume is the amount of space an object takes up; capacity is the amount a container can hold.

Explain why we must convert units to the same measurement before adding them together.

You cannot add different units (like cm and m) directly because they represent different scales; they must be equivalent to be comparable.

If a square has a perimeter of 36cm, what is the area of the square?

81cm^2 ($\text{Side} = 36 \div 4 = 9\text{cm}$. $\text{Area} = 9 \times 9 = 81\text{cm}^2$).

Justify why a shape with a larger perimeter does not necessarily have a larger area.

Different shapes can have the same perimeter but different internal areas depending on their configuration and dimensions.

What might happen to the volume of a box if you double only the height?

The volume would also double, because volume is a product of three dimensions.

A shop sells juice for £1.20 per litre. How much would 250ml cost?

£0.30 (or 30p). 1 litre = 1000ml. 250ml is a quarter of a litre. $\text{£}1.20 \div 4 = \text{£}0.30$.