

Max's Measurement Mastery: Area and Perimeter Challenge

Learning objective: To calculate and compare the area and perimeter of rectilinear shapes and solve multi-step problems involving measurements in centimetres and metres.

Test your geometric knowledge with these flashcards designed by Max the Monkey. Read the front side, think carefully about the mathematical principles, and flip to reveal the answer.

Definition: What is the 'Perimeter' of a shape?

The total distance around the outside edge of a 2D shape.

Definition: What is the 'Area' of a shape?

The amount of space taken up inside a 2D shape, usually measured in square units.

Max has a rectangular garden measuring 5m by 3m. What is the perimeter?

16m ($5 + 3 + 5 + 3 = 16$).

Calculate the area of a rectangle with a length of 8cm and a width of 4cm.

32cm² ($8 \times 4 = 32$).

What is the formula to find the area of a rectangle?

Area = length $\times$ width.

If a square has a side length of 6cm, what is its perimeter?

24cm ($6 \times 4 = 24$).

True or False: Two shapes can have the same area but different perimeters.

True. For example, a 4x4 square and an 8x2 rectangle both have an area of 16, but different perimeters.

How do you calculate the perimeter of an irregular rectilinear shape?

Add the lengths of all the outer sides together.

Max builds a pen with a perimeter of 20m. If one side is 6m, what is the opposite side?

6m (opposite sides of a rectangle are equal).

If a floor tile is 10cm by 10cm, what is its area?

100cm².

Can a rectangle with an area of 12cm² have a perimeter of 14cm?

Yes, a rectangle with sides of 3cm and 4cm ($3+4+3+4 = 14$ perimeter; $3 \times 4 = 12$ area).

Why do we use 'squared' units (like cm²) for area?

Because we are measuring a 2D surface using two dimensions (length and width).