Measuring boundaries and covering regions

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A sample from this topic. The complete topic collection contains three different resources and worked solutions.

Show your thinking using words, working or a labelled drawing. Use the explanations and example first.

What you will practise

• Measuring boundaries and covering regions

• Explain and check an answer with an appropriate representation.

Useful starting skills: Use objects, drawings or a number line to explain a simple idea.

Perimeter is the distance around a boundary; area is the amount of surface inside it. Use length units for perimeter and square units for area.

A rectangle’s area can be counted as equal rows of unit squares. This gives area=length×width. Composite areas can be split into non-overlapping rectangles, then combined. Check that all measurements use the same units.

Worked example

A rectangle is 7 cm by 3 cm. Find its area and perimeter.

Area=7×3=21 square centimetres.

Perimeter=7+3+7+3=20 centimetres.

Answer: 21 cm^2 and 20 cm

Try it yourself

Name: _____ Date: _____

1. A shape covers 12 full grid squares and 4 half-squares. Estimate its area in square units.

2. A rectangle is 8 cm long and 3 cm wide. Find its perimeter and area.

Answers and explanations

Check the method as well as the final answer. An alternative correct method is also valid.

1. 14

Pair the four half-squares to make two full squares, then add 12.

2. Perimeter 22 cm; area 24 cm²

Perimeter adds four sides:8+3+8+3=22. Area counts 8 rows of 3 square-centimetres:8×3=24.

Curriculum reference: VC2M4M02

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