Perimeter and area - topic test

12 questions | 22 marks | 30 minutes

Begin with familiar ideas, then explain and apply your understanding. Show your working.

Equivalent correct methods earn the corresponding marks.

1. Which measure is needed for ribbon around a card: area or perimeter? [1 mark]

Ribbon follows the boundary.

Answer: Perimeter.

2. Which measure is needed to cover a table with paper? [1 mark]

Paper covers the surface.

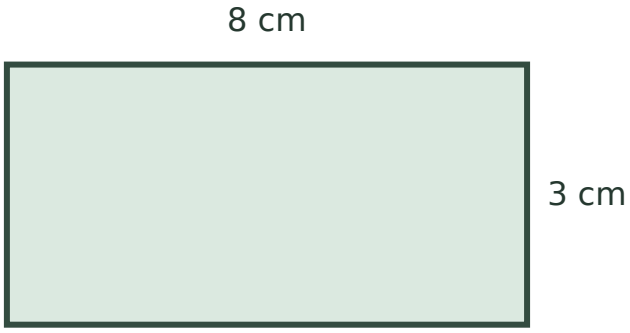
Answer: Area.

3. Find the perimeter of a square with sides 4 cm. [1 mark]

$4 + 4 + 4 + 4 = 16$ cm.

Answer: 16 cm.

4. Find the perimeter of the supplied rectangle. [2 marks]



Not drawn to scale

$8 + 3 + 8 + 3 = 22$ cm.

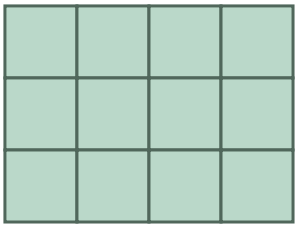
Answer: 22 cm.

5. Find the perimeter of a triangular garden with sides 6 m, 5 m and 4 m. [1 mark]

$6 + 5 + 4 = 15$ m.

Answer: 15 m.

6. Find the area of the fully shaded grid. [2 marks]



Each square is 1 square unit

There are 4 squares in each of 3 rows: $4 + 4 + 4 = 12$.

Answer: 12 square units.

7. A region covers 5 whole squares and 6 half-squares. Find its area. [2 marks]

Six halves make 3 wholes.

$5 + 3 = 8$.

Answer: 8 square units.

8. Mia measures a floor using square tiles. Some tiles overlap. Why is her count not a fair area measurement? [2 marks]

The covering must have no gaps or overlaps.

Answer: Overlaps count parts of the floor more than once.

9. A square has a perimeter of 28 cm. Find its side length. [2 marks]

28 divided among 4 equal sides gives 7 cm.

Answer: 7 cm.

10. Two rectangles are 1 cm by 6 cm and 2 cm by 3 cm. Compare their areas. [2 marks]

Each covers six 1-square-centimetre units.

Answer: Both have area 6 square centimetres.

11. Compare the perimeters of a 1 cm by 6 cm rectangle and a 2 cm by 3 cm rectangle. [3 marks]

$1 + 6 + 1 + 6 = 14.$

$2 + 3 + 2 + 3 = 10.$

Answer: 14 cm and 10 cm; the 1 by 6 rectangle has the larger perimeter.

12. A gardener needs fence and grass for a 5 m by 3 m rectangular garden. [3 marks]

(a) Find the length of fence needed around the whole garden. [1 mark]

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

Answer: 16 m.

(b) Find the area of grass needed to cover the garden. [2 marks]

There are three rows of five square metres.

$5 + 5 + 5 = 15$ square metres.

Answer: 15 square metres.