Boundary and area problems

6 questions | 15 marks

Equivalent correct methods earn the corresponding marks.

1. Find the perimeter of a 7 cm by 3 cm rectangle. [2 marks]

$7 + 3 + 7 + 3 = 20$ cm.

Answer: 20 cm

2. Find the perimeter of a square with side 6 m. [2 marks]

$4 \times 6 = 24$ m.

Answer: 24 m

3. A rectangle has perimeter 24 cm and width 4 cm. Find its length. [3 marks]

Two widths: $2 \times 4 = 8$ cm.

Two lengths: $24 - 8 = 16$ cm.

One length: $16 \div 2 = 8$ cm.

Answer: 8 cm

4. A 10 m by 4 m garden has a 3 m opening. Find the fencing length. [2 marks]

Perimeter: $10+4+10+4=28$ m.

$28-3=25$ m.

Answer: 25 m

5. Choose area or perimeter for each task. [2 marks]

(a) Carpet to cover a room. [1 mark]

Carpet covers the inside surface.

Answer: Area

(b) Ribbon around a card. [1 mark]

Ribbon follows the outside boundary.

Answer: Perimeter

6. Compare a 5 cm by 5 cm square and a 7 cm by 3 cm rectangle. Check their perimeters and compare their areas. [4 marks]

Square: perimeter $4\times5=20$ cm; area $5\times5=25$ cm^2.

Rectangle: perimeter $7+3+7+3=20$ cm; area $7\times3=21$ cm^2.

Answer: Both perimeters are 20 cm. The areas are 25 cm^2 and 21 cm^2, so the square has 4 cm^2 more area.