Comparing shapes

6 questions | 8 marks

Equivalent correct methods earn the corresponding marks.

1. Which has more area: 2 rows of 5 unit squares or 3 rows of 3? [1 mark]

10 is greater than 9.

Answer: 2 rows of 5: 10 square units, which is 1 more.

2. Compare the areas of a 1 by 8 strip and a 2 by 4 rectangle. [1 mark]

Each arrangement contains eight unit squares.

Answer: Both have area 8 square units.

3. Find the perimeter of a 1 cm by 8 cm rectangle. [1 mark]

$1 + 8 + 1 + 8 = 18$ cm.

Answer: 18 cm.

4. Find the perimeter of a 2 cm by 4 cm rectangle. [1 mark]

$2 + 4 + 2 + 4 = 12$ cm.

Answer: 12 cm.

5. Two gardens both have 16 m of fence. Must they have the same area? Explain. [2 marks]

Equal outside distance does not fix the amount of inside space.

Answer: No. For example, 1 m by 7 m and 4 m by 4 m have perimeter 16 m but areas 7 and 16 square metres.

6. Arrange 6 unit squares into two different rectangles. Compare their boundaries. [2 marks]

Both cover 6 square units.

Count the outside unit edges of each arrangement.

Answer: 1 by 6 has perimeter 14 units; 2 by 3 has perimeter 10 units.