Perimeter, area and volume

Name: _____ **Date:** _____



Mr Boston says: Use the **perpendicular** height for triangles, not the sloping side.

A. Perimeter and area

1 Rectangle 17 cm by 11 cm: perimeter and area

Answer: _____

2 Rectangle 17 cm by 4 cm: perimeter and area

Answer: _____

3 Rectangle 5 cm by 7 cm: perimeter and area

Answer: _____

4 Triangle with base 16 cm and height 7 cm: area

Answer: _____

5 Triangle with base 9 cm and height 12 cm: area

Answer: _____

6 Parallelogram with base 9 cm and height 5 cm: area

Answer: _____

B. Volume, circles and problems

Use the π button on a calculator (or π ≈ 3.142).

7 Cuboid 8 cm × 5 cm × 4 cm: volume

Answer: _____

8 Cuboid 8 cm × 3 cm × 6 cm: volume

Answer: _____

9 Cube with sides of 6 cm: volume

Answer: _____

10 Circle with radius 7 cm: area to 1 d.p.

Answer: _____

11 Circle with diameter 12 cm: circumference to 1 d.p.

Answer: _____

12 An L-shape: a 10 cm by 8 cm rectangle with a 4 cm by 3 cm corner cut out. Area?

Answer: _____

13 A square has an area of 49 m². What is its perimeter?

Answer: _____

14 A garden is 12 m by 8 m. Turf costs £4.50 per m². How much to turf it all?

Answer: _____

Answers for grown-ups

Perimeter, area and volume

1. Rectangle 17 cm by 11 cm: perimeter and area → **P = 56 cm, A = 187 cm²**
2. Rectangle 17 cm by 4 cm: perimeter and area → **P = 42 cm, A = 68 cm²**
3. Rectangle 5 cm by 7 cm: perimeter and area → **P = 24 cm, A = 35 cm²**
4. Triangle with base 16 cm and height 7 cm: area → **56 cm²**
5. Triangle with base 9 cm and height 12 cm: area → **54 cm²**
6. Parallelogram with base 9 cm and height 5 cm: area → **45 cm²**
7. Cuboid 8 cm × 5 cm × 4 cm: volume → **160 cm³**
8. Cuboid 8 cm × 3 cm × 6 cm: volume → **144 cm³**
9. Cube with sides of 6 cm: volume → **216 cm³**
10. Circle with radius 7 cm: area to 1 d.p. → **153.9 cm²**
11. Circle with diameter 12 cm: circumference to 1 d.p. → **37.7 cm**
12. An L-shape: a 10 cm by 8 cm rectangle with a 4 cm by 3 cm corner cut out. Area? → **68 cm²**
13. A square has an area of 49 m². What is its perimeter? → **28 m**
14. A garden is 12 m by 8 m. Turf costs £4.50 per m². How much to turf it all? → **£432.00**