Area and Perimeter: Every Shape (Complete Guide)

MEMORANDUM

Name: ..... Class: .....

Date: .....

MARK ____ / 23

Answer all questions. Show all your working — marks are awarded for method as well as the final answer. **Teacher copy: accept any correct equivalent method.**

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1 A square has an area of 196 cm^2. Determine the length of one side, and hence its perimeter. **(3)**

> side $= \sqrt{196}$ $=$ **14 cm** *(2)*
> Perimeter $= 4 \times 14 =$ **56 cm** *(1)* ✓✓✓ (3)

2 Perimeter of a rectangle 8 cm by 5 cm *(rectangle)* **(1)**



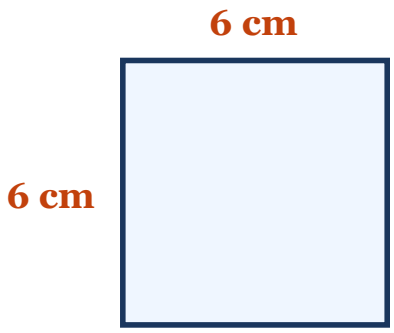
> $2(8 + 5) =$ **26 cm** ✓ (1)

3 Area of a rectangle 8 cm by 5 cm *(rectangle)* **(1)**



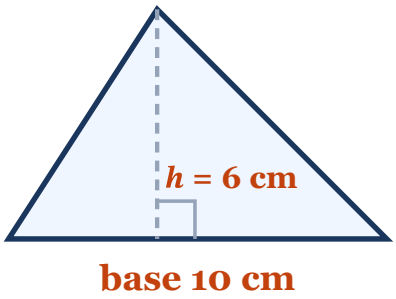
> $8 \times 5 =$ **40 cm^2** ✓ (1)

4 Perimeter and area of a square with side 6 cm *(square)* (2)



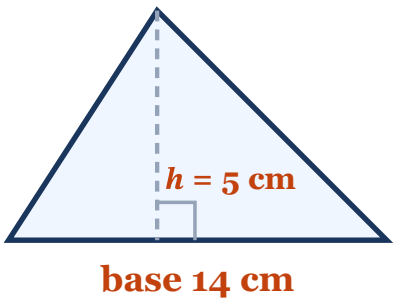
P = 4 × 6 = 24 cm; A = 6^2 = **36 cm²** ✓✓ (2)

5 Area of a triangle, base 10 cm, height 6 cm *(triangle)* (2)



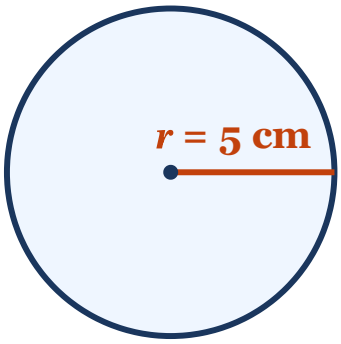
$\frac{1}{2}$ × 10 × 6 = **30 cm²** ✓✓ (2)

6 Area of a triangle, base 14 cm, height 5 cm *(triangle)* (2)



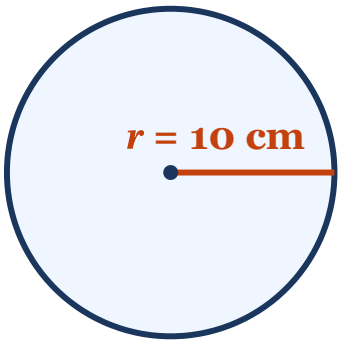
$\frac{1}{2}$ × 14 × 5 = **35 cm²** ✓✓ (2)

7 Circumference of a circle, radius 5 cm (π ≈ 3,14) *(circle)* (2)



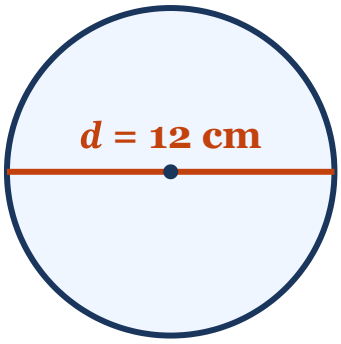
$2 \times 3{,}14 \times 5 = \mathbf{31{,}4\ cm}$ ✓✓ (2)

8 Area of a circle, radius 10 cm (π ≈ 3,14) *(circle)* (2)



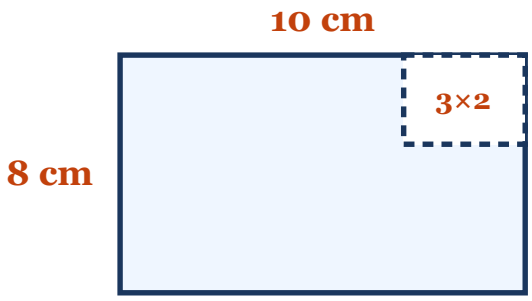
$3{,}14 \times 100 = \mathbf{314\ cm^2}$ ✓✓ (2)

9 Area of a circle with DIAMETER 12 cm (π ≈ 3,14) *(circle)* (3)



$r = 6$; $3{,}14 \times 36 = \mathbf{113{,}04\ cm^2}$ ✓✓✓ (3)

10 A 10×8 rectangle with a 3×2 rectangle cut out — area? *(composite)* **(3)**



cut-out removed

$80 - 6 = \mathbf{74\ cm^2}$ ✓✓✓ (3)

11 A rectangle has area 60 cm^2 and breadth 5 cm. Find its length. *(reverse)* **(2)**

$60 \div 5 = \mathbf{12\ cm}$ ✓✓ (2)

TOTAL: 23 marks

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