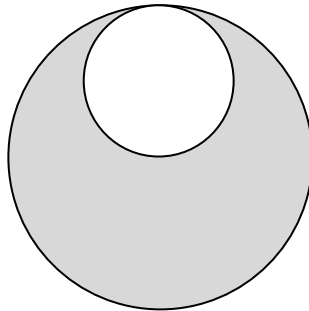


# Topic Test 1 (20 minutes)

## Circumference and area - Higher

- 1 This shape is made from circles.  
The diameter of the larger circle is twice the diameter of the smaller circle.



Not drawn accurately

What fraction of the shape is shaded?

Give your answer in its simplest form.

**[4 marks]**

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Answer \_\_\_\_\_



3 The surface area of a marble is  $4.5 \text{ cm}^2$

You are given that surface area of a sphere =  $4\pi \times \text{radius}^2$

Work out the radius of the marble.

[3 marks]

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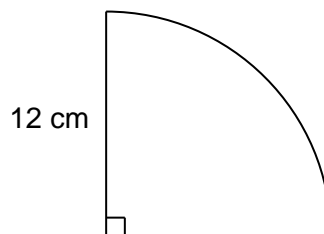
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Answer \_\_\_\_\_ cm

4 The diagram shows a quarter circle of radius 12 cm



Circle the expression for the perimeter of the shape, in cm

[1 mark]

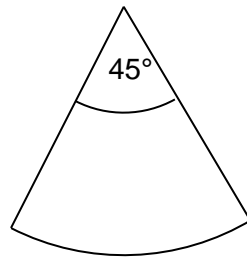
$6\pi + 12$

$6\pi + 24$

$24\pi + 12$

$24\pi + 24$

5 The diagram shows a sector of a circle.



Not drawn accurately

The arc length is 18 cm

Work out the radius.

[3 marks]

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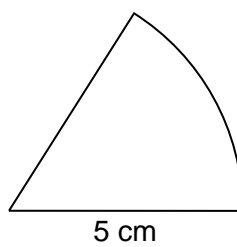
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Answer \_\_\_\_\_ cm

6 The diagram shows a sector of a circle of radius 5 cm



Not drawn accurately

The area of the sector is  $5\pi \text{ cm}^2$

Work out the arc length.

Give your answer in terms of  $\pi$ .

[5 marks]

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Answer \_\_\_\_\_ cm