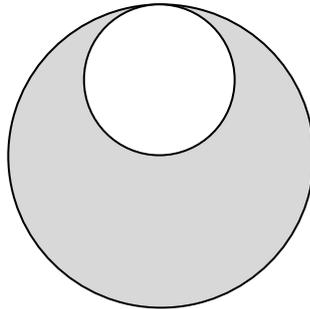# Topic Test 1 (20 minutes)
Circumference and area - Higher

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]

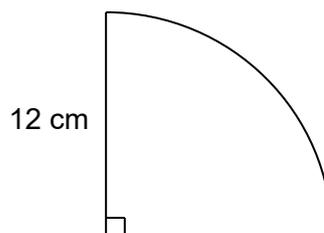_____

_____

_____

_____

_____

_____

_____

Answer _____

2 The diagram shows a solid cone.

10 cm

24 cm

Not drawn accurately

You are given that   curved surface area of a cone = π × radius × slant height

Work out the **total** surface area of the cone.

[4 marks]

_____

_____

_____

_____

_____

_____

_____

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_____

_____

_____

_____

_____

Answer _____ cm^2

3 The surface area of a marble is 4.5 cm^2

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

Work out the radius of the marble.

[3 marks]

Answer _____ cm

4   The diagram shows a quarter circle of radius 12 cm

12 cm

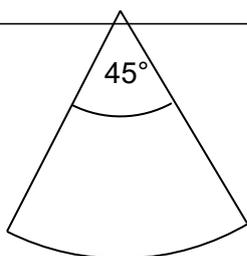Circle the expression for the perimeter of the shape, in cm

[1 mark]

$6\pi + 12$ $6\pi + 24$ $24\pi + 12$ $24\pi + 24$

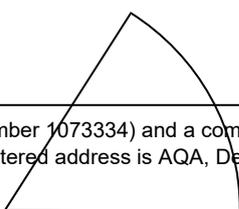**5**   The diagram shows a sector of a circle.

Not drawn
accurately

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England and Wales (number 3644723). Our registered address is AQA, Devas Street, Manchester M15 6EX.

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45°

The arc length is 18 cm

Work out the radius.

[3 marks]

Answer _____ cm

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

Not drawn
accurately

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England and Wales (number 3644723). Our registered address is AQA, Devas Street, Manchester M15 6EX.

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5 cm

The area of the sector is 5π cm^2

Work out the arc length.
Give your answer in terms of π.

[5 marks]

Answer _____ cm