

Circles, cylinders and composite shapes

Name: _____

Write all answers correct to 2 decimal places unless otherwise specified.

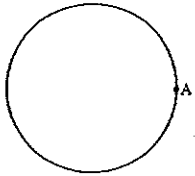
1 What is 52 m converted to centimetres?

- A 5.2 cm
- B 5200 cm
- C 520 cm
- D 0.52 cm

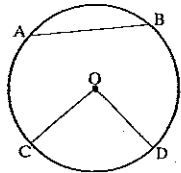
2 What is the name given to a straight line going from the centre of the circle to the circumference?

Draw a diagram to show your answer.

3 Draw a tangent to the circle shown below at point A.



4

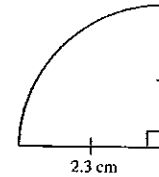


Which of the following is *not* a correct statement?

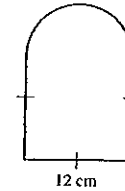
- A AB is a chord
- B COD is a sector
- C CO is a diameter
- D Arc CABD forms a major sector

5 Calculate the circumference of a circle with diameter 7 cm.

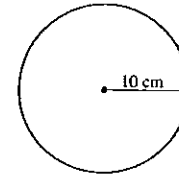
6 Calculate the perimeter of the shape below.



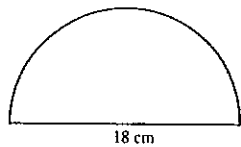
7 Find the perimeter of the shape below.



8 Find the area of the circle shown below.



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- 9 Find the area of the shape below correct to 1 decimal place.



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- 10 A circle has an area of 176.7 cm^2 .
Find the radius of this circle, correct to 1 decimal place.
-

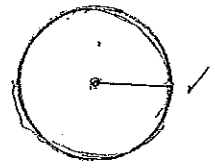
Circles, cylinders and composite shapes

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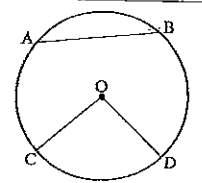
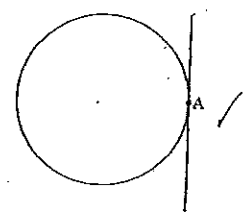
Write all answers correct to 2 decimal places unless otherwise specified.

1. What is 52 m converted to centimetres?
 A 5.2 cm
 B 5200 cm ✓
 C 520 cm
 D 0.52 cm

2. What is the name given to a straight line going from the centre of the circle to the circumference? *radius* ✓
 Draw a diagram to show your answer.



- Draw a tangent to the circle shown below at point A.



- Which of the following is *not* a correct statement?
 A AB is a chord
 B COD is a sector
 C CO is a diameter ✓
 D Arc CABD forms a major sector

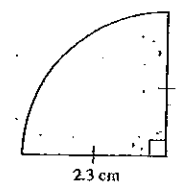
Calculate the circumference of a circle with diameter 7 cm.

$$C = \pi \times d$$

$$= \pi \times 7$$

$$= 21.99 \text{ cm}$$

Calculate the perimeter of the shape below.



$$P = 2\pi r$$

$$= 2 \times 2.3 \times \pi$$

$$= 14.45$$

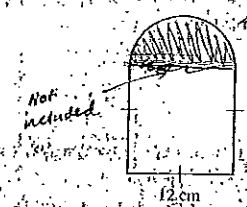
$$r = 8.2125 \text{ cm}$$

$$\frac{14.45}{4} = 3.6125$$

$$3.6125 + (2.3 \times 2)$$

$$= 8.2125 \text{ cm}$$

Find the perimeter of the shape below.

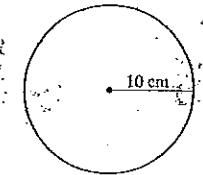


Perimeter of square = 12×4
 $= 48.36$

Perimeter of semicircle = $\pi \times d$
 $= \pi \times 12$
 $= 37.70$

Total perimeter = $48.36 + 37.70$
 $= 86.06 \text{ cm}$

Find the area of the circle shown below.

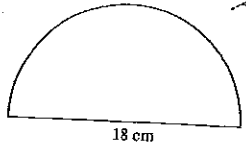


$$\text{Area} = \pi r^2$$

$$= \pi \times 10^2$$

$$= 314.16 \text{ cm}^2$$

- 9 Find the area of the shape below correct to 1 decimal place.



$$\begin{aligned} \text{Area} &= \pi r^2 \\ &= \pi \times 9^2 \checkmark \\ &= 254.47 \checkmark \\ 254.47 \div 2 &= \text{area} \\ &= 127.235 \text{ cm}^2 \checkmark \end{aligned}$$

- 10 A circle has an area of 176.7 cm^2 . Find the radius of this circle, correct to 1 decimal place.

$$\begin{aligned} \text{Area} &= \pi r^2 \\ 176.7 &= \pi r^2 \checkmark \\ &= 7.5 \text{ cm} \checkmark \end{aligned}$$