

# Circles, cylinders and composite shapes

Name: \_\_\_\_\_

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

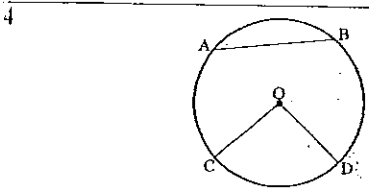
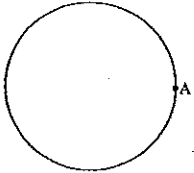
1 What is 52 m converted to centimetres?

- 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.

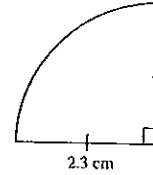


Which of the following is *not* a correct statement?

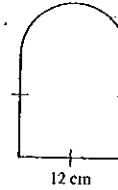
- A AB is a chord
- B COD is a sector
- C CO is a diameter
- D Arc CABD forms a major sector

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

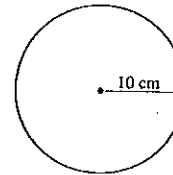
6 Calculate the perimeter of the shape below.



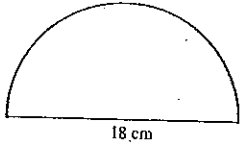
7 Find the perimeter of the shape below.



8 Find the area of the circle shown below.



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



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

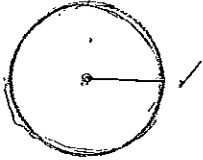
Circles, cylinders and composite shapes

Name: Felicid Wong

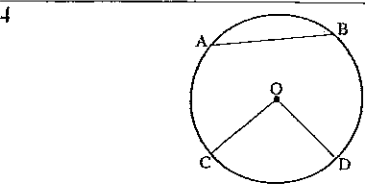
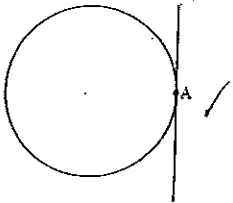
Write all answers correct to 2 decimal places unless otherwise specified.

- 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.



- 3 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

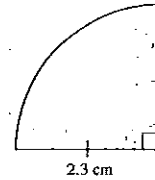
Calculate the circumference of a circle with diameter 7 cm.

$$C = \pi \times d$$

$$= \pi \times 7$$

$$= 21.99 \text{ cm}$$

Calculate the perimeter of the shape below.



$$C = 2\pi r$$

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

$$= 14.45$$

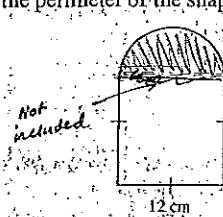
$$r = 8.2125 \text{ m}$$

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

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

$$= 8.2125 \text{ cm}$$

Find the perimeter of the shape below.



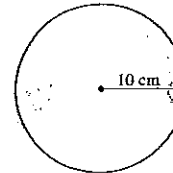
Perimeter of square =  $12 \times 4$   
 $= 48.36$

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

Perimeter =  $37.70 \div 2 + 12.36$   
 $= 30.85 \text{ cm}$

Total perimeter =  $48.36 + 30.85$   
 $= 79.21 \text{ cm}$

Find the area of the circle shown below.

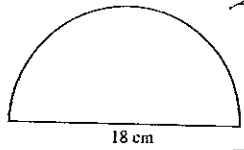


$$\text{Area} = \pi r^2$$

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

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

- 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  $176.7 \text{ cm}^2$ . Find the radius of this circle, correct to 1 decimal place.

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