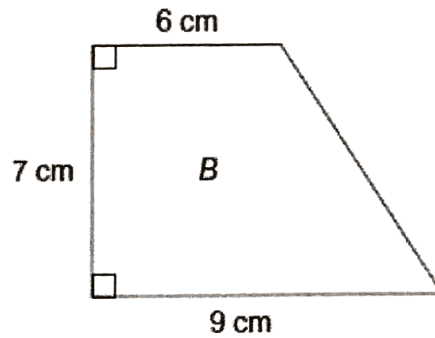
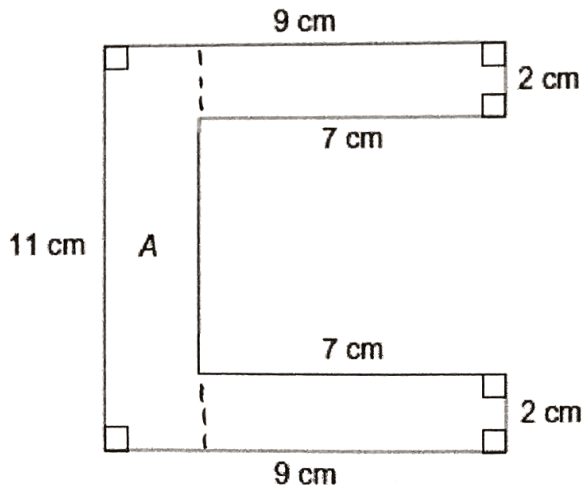


End of Unit Test
Area and Perimeter - HIGHER

Name: Answers



1. Not drawn accurately



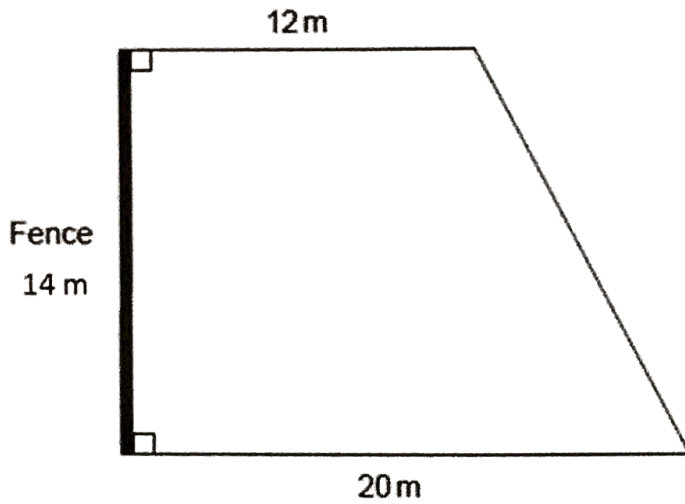
Which shape has the greater **area** and by how much? You **must** show your working.

Area of A = $(7 \times 2) + (11 \times 2) + (7 \times 2)$
 $= 14 + 22 + 14$
 $= 50 \text{ cm}^2$

Area of B = $\frac{1}{2} (6 + 9) 7$
 $= 52.5 \text{ cm}^2$

Shape B is greater by 2.5 cm²
(Total 6 marks)

2) The diagram shows a lawn with a fence along one edge.



Not drawn accurately

$$\begin{array}{r} 16 \\ 14 \times \\ \hline 64 \\ ^2 \\ 160 + \\ \hline 224 \end{array}$$

One can of weed killer covers 90 square metres. Each can costs £19.25. Work out the total cost of the cans of weed killer needed to cover the lawn.

$$\begin{aligned} \text{Area} &= \frac{1}{2} (12 + 20) 14 \\ &= 16 \times 14 \\ &= 224 \text{m}^2 \end{aligned}$$

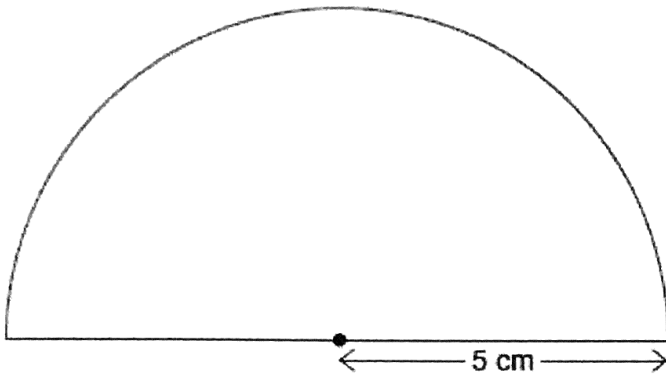
$$224 \div 90 = 2 \text{ r. } 64 \rightarrow 3 \text{ cans needed.}$$

$$3 \times £19.25 = £57.75$$

Answer £ 57.75

(Total 5 marks)

- 3) This semi-circle has a radius of 5 cm. Not drawn accurately.

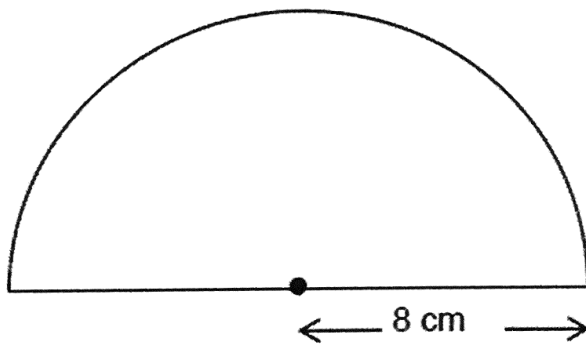


Work out the **perimeter** of the semi-circle. Remember to include the base. Use the approximation $\pi = 3.1$

$$\frac{10 \times 3.1}{2} + 10 = 15.5 + 10 = 25.5 \text{ cm}$$

Answer 25.5 cm
(Total 3 marks)

- 4) The diagram shows a semicircle of radius 8 cm. Not drawn accurately

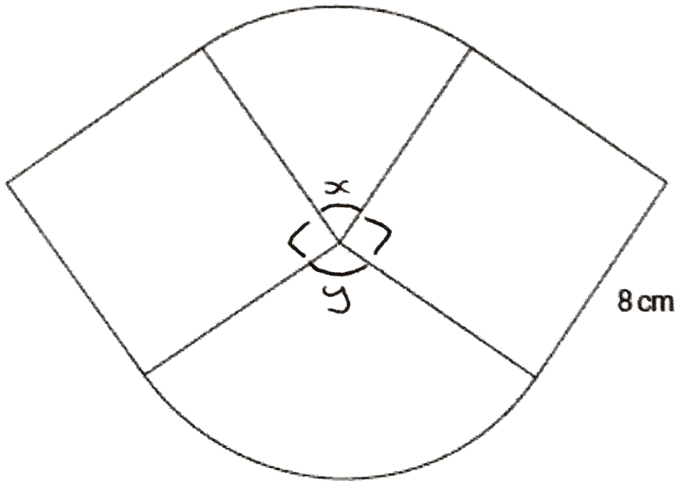


Work out the area of the semicircle. Give your answer in terms of π .

$$\frac{8^2 \times \pi}{2} = \frac{64\pi}{2} = 32\pi$$

Answer 32 π cm²
(Total 2 marks)

- 5) This shape is made from two sectors and two squares of side 8 cm. The radius of each sector is also 8 cm. Not drawn accurately



Work out the total area of the shape. Give your answer in terms of π .

$$x + y = 180^\circ \therefore 2 \text{ squares} + \text{semicircle}$$

$$\text{Square} = 8^2 = 64 \text{ cm}^2$$

$$\text{Semicircle} = \frac{8^2 \times \pi}{2} = 32\pi$$

$$\text{Total} = 32\pi + (2 \times 64) = 32\pi + 128$$

Answer $32\pi + 128$ cm^2
(Total 4 marks)

(Total for test = 20 marks)