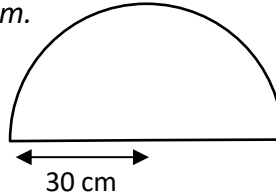




AREA OF A SEMI-CIRCLE PROBLEMS 2B

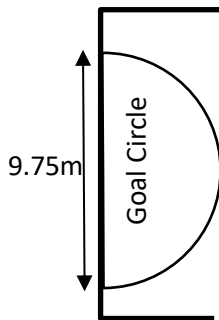
Working out

- 1) A semicircular window has a radius of 30cm.
What is the area of the window?
Give your answer to the nearest square cm.



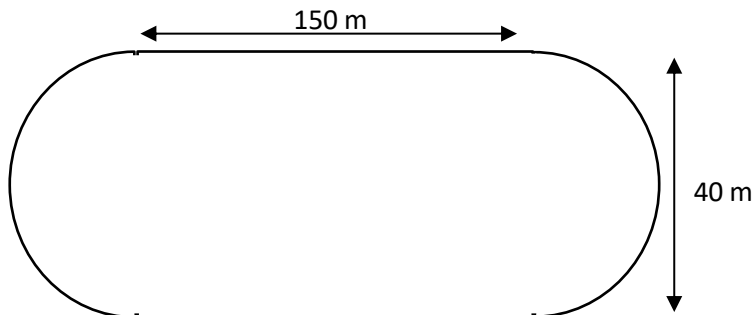
Area of the window is _____.

- 2) In netball, the goal circle is a semi-circle with a diameter of 9.75 m. What is the area of the goal circle.
Give your answer to 1 decimal place.



Area of the goal circle is _____.

- 3) A running track is made up of 2 semi-circles at either end and a rectangle in the middle (see diagram below).
What is the area of the track to the nearest m^2 ?



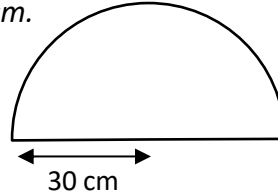
Area of the track is _____.



AREA OF A SEMI-CIRCLE PROBLEMS 2B ANSWERS

Working out

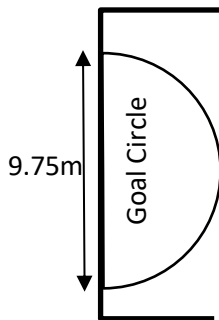
- 1) A semicircular window has a radius of 30cm.
What is the area of the window?
Give your answer to the nearest square cm.



Area of a semi-circle is
 $(\pi r^2)/2 = (\pi \times 30^2)/2 = 450\pi$
 $\pi = 1413.7 \text{ cm}^2$

Area of the window is 1414 cm²

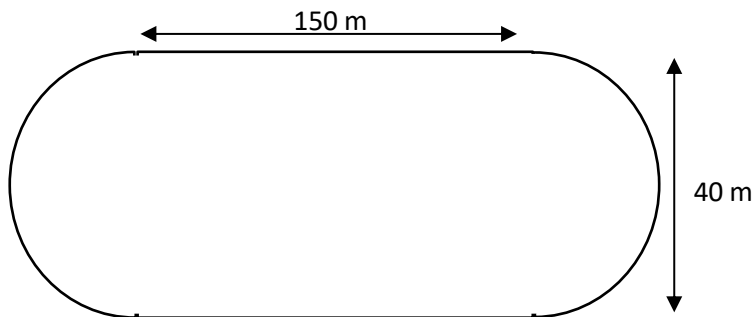
- 2) In netball, the goal circle is a semi-circle with a diameter of 9.75 m. What is the area of the goal circle.
Give your answer to 1 decimal place.



Radius of goal = $9.75/2 = 4.875$
 Area of a semi-circle is
 $(\pi r^2)/2 = (\pi \times 4.875^2)/2 = 37.3 \text{ m}^2$

Area of the goal circle is 37.3 m²

- 3) A running track is made up of 2 semi-circles at either end and a rectangle in the middle (see diagram below).
What is the area of the track to the nearest m²?



Area of Running track =
 Area of rectangle + Area
 of 2 semi-circles.
 Area of rectangle is $150 \times 40 = 6000 \text{ m}^2$
 If we put the two semi-circles together, we get a circle with radius 20 m.
 Area of circle = $\pi r^2 = \pi \times 20^2 = 400\pi = 1256.6 \text{ m}^2$
 So Area of running track =
 $6000 + 1256.6 = 7256.6 \text{ m}^2$

Area of the track is 7257 m²