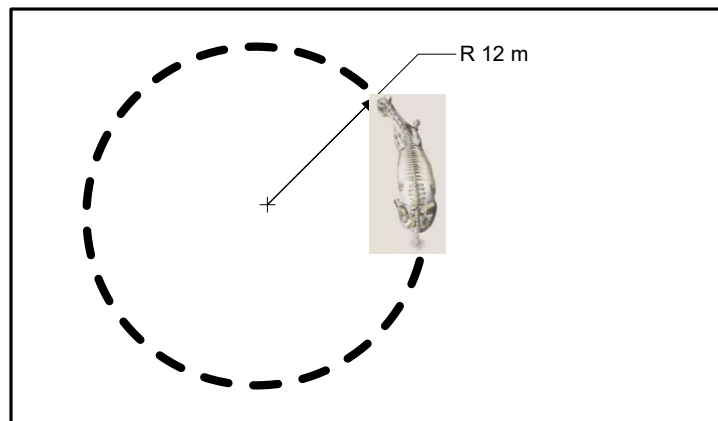


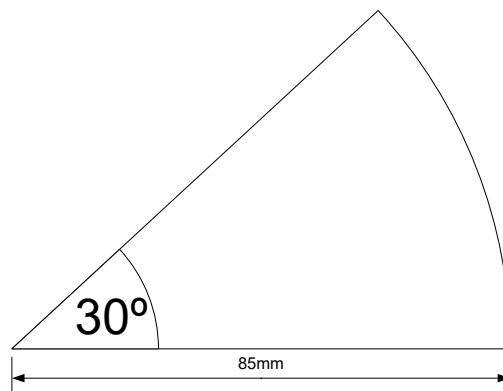
## Circumference of a Circle

$$C = 2\pi r$$

- Q1 A circle has a radius of 24 cm. Calculate the circumference. Give an exact answer.
- Q2 A circle has a radius of 37 cm. Calculate the circumference. Give your answer in terms of  $\pi$ .
- Q3 A circle has a circumference of  $40\pi$  cm. Calculate the radius.
- Q4 A circle has a circumference of  $68\pi$  cm. Calculate the diameter.
- Q5 A circle has a circumference of 64 cm. Calculate the radius. Give your answer correct to two decimal places.
- Q6 A circle has a radius of 52 cm. Calculate the circumference. Give your answer correct to two decimal places.
- Q7 A circle has a diameter of 35 cm. Find the circumference. Give your answer correct to three decimal places.
- Q8 A rope is attached to a horse and then fastened in the middle of a field. The horse wears a path round the field. The rope is 12 metres long. Assuming that the rope is at full stretch, what is the length of the path that the horse wears in the field?



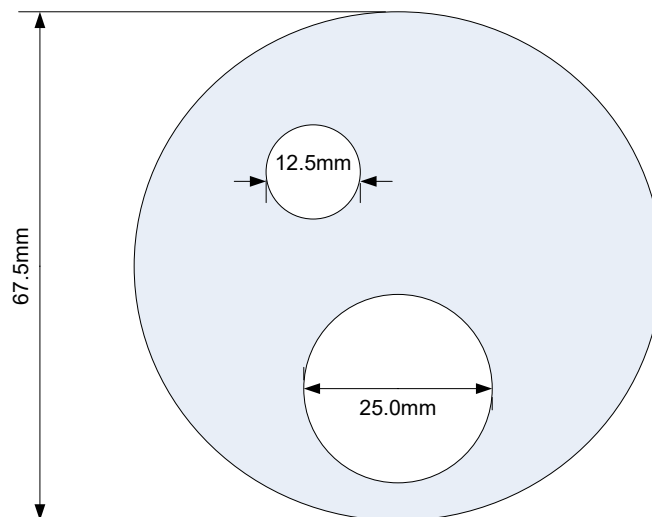
- Q9 A farmer has a circular field. He wants to put a fence around it. Fencing costs him £35 per metre to construct. The field has a diameter of 80 metres. Giving your answer correct to the nearest penny, calculate the cost of the field.
- Q10 Find the perimeter of this sector.



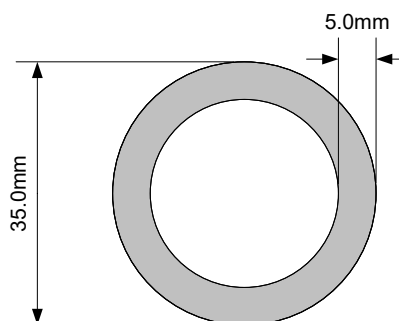
## Area of a Circle

$$A = \pi r^2$$

- Q11 A circle has a radius of 7cm. Find the exact area of the circle.
- Q12 A circle has a diameter of 12cm. Find the area of the circle correct to 2 decimal places.
- Q13 A circular field has a diameter of 160m. If land costs £10,000 per acre (about 4050m<sup>2</sup>), how much is the land worth?
- Q14 What is the area of the shaded part of the circle below?



- Q15 What is the area of the grey part of the diagram below?



- Q16 Square ABCD has an area of 144 cm<sup>2</sup>. What is the area of the shaded part of the square outside the circle?

