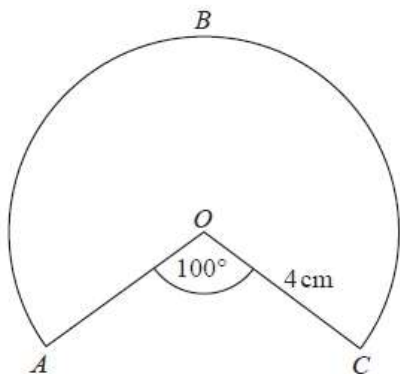


GCSE QUESTIONS

Q1. CALCULATOR ALLOWED

The diagram shows a sector of a circle of radius 4 cm.



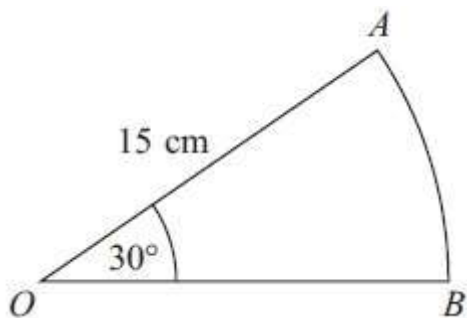
Work out the length of the arc ABC .
Give your answer correct to 3 significant figures.

..... cm

(Total for question = 2 marks)

Q2. CALCULATOR ALLOWED

OAB is a sector of a circle, centre O .



The radius of the circle is 15 cm.
The angle of the sector is 30° .

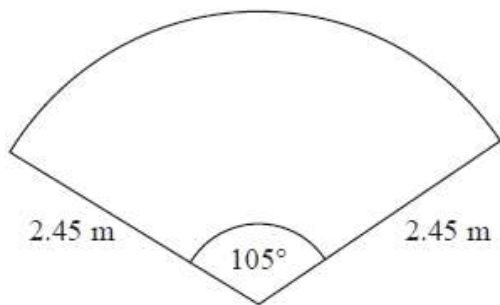
Calculate the area of sector OAB .
Give your answer correct to 3 significant figures.

..... cm^2

(Total for Question is 2 marks)

Q3. CALCULATOR ALLOWED

The diagram shows a pond.



The pond is in the shape of a sector of a circle.
 Toby is going to put edging on the perimeter of the pond.
 Edging is sold in lengths of 1.75 metres.
 Each length of edging costs £3.49

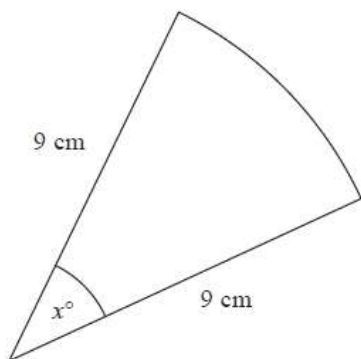
Work out the total cost of edging Toby needs to buy.

£

(Total for question = 5 marks)

Q4. CALCULATOR ALLOWED

The diagram shows a sector of a circle of radius 9 cm.



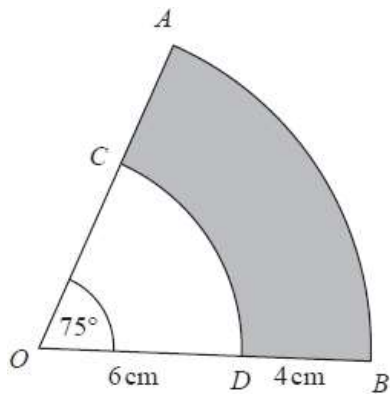
The sector has a perimeter of 25 cm.

Work out the value of x .
 Give your answer correct to 1 decimal place.

.....

(Total for question = 4 marks)

Q5. CALCULATOR ALLOWED



OAB is a sector of a circle, centre O .
 OCD is a sector of a circle, centre O .
 OCA and ODB are straight lines.

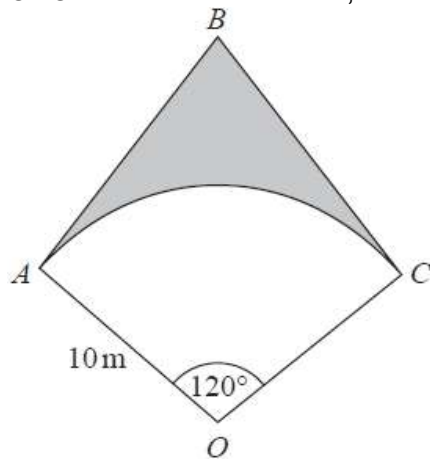
Angle $AOB = 75^\circ$
 $OD = 6$ cm
 $DB = 4$ cm

Calculate the perimeter of the shaded region.
 Give your answer correct to 3 significant figures.

..... cm
 (Total for question = 3 marks)

Q6. CALCULATOR ALLOWED

OAC is a sector of a circle, centre O , radius 10 m.



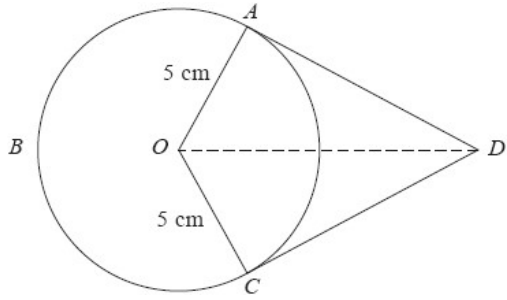
BA is the tangent to the circle at point A .
 BC is the tangent to the circle at point C .
 Angle $AOC = 120^\circ$

Calculate the area of the shaded region.
 Give your answer correct to 3 significant figures.

..... m²
 (Total for question = 5 marks)

Q7. CALCULATOR ALLOWED

A, B and C are points on a circle of radius 5 cm, centre O.



DA and DC are tangents to the circle.
DO = 9 cm

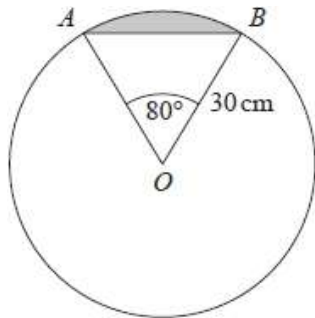
Work out the length of arc ABC.
Give your answer correct to 3 significant figures.

..... cm

(Total for question = 5 marks)

Q8. CALCULATOR ALLOWED

AB is a chord of a circle centre O.



The radius of the circle is 30 cm.
Angle AOB = 80°

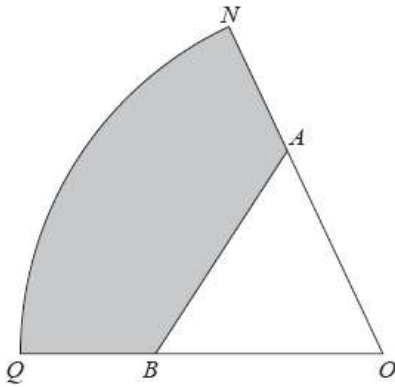
Work out what percentage of the area of the circle is shaded.

..... %

(Total for question = 5 marks)

Q9. CALCULATOR ALLOWED

ONQ is a sector of a circle with centre O and radius 11 cm.



A is the point on ON and B is the point on OQ such that AOB is an equilateral triangle of side 7 cm.

Calculate the area of the shaded region as a percentage of the area of the sector ONQ .

Give your answer correct to 1 decimal place.

..... %

(Total for question = 5 marks)