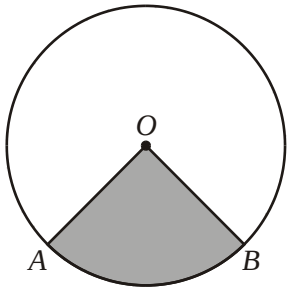
Formative on Trig(Radians, Arc, Sectors) Time: 25 minutes Marks: 18

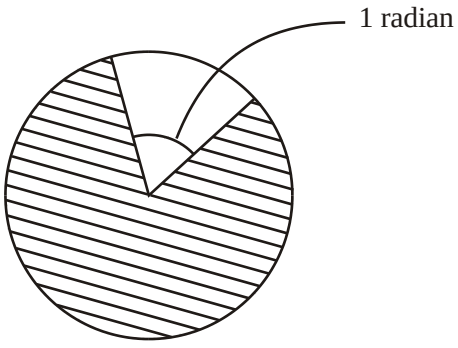
1. *O* is the centre of the circle which has a radius of 5.4 cm.



The area of the shaded sector *OAB* is 21.6 cm^2. Find the length of the minor arc *AB*.

(Total 4 marks)

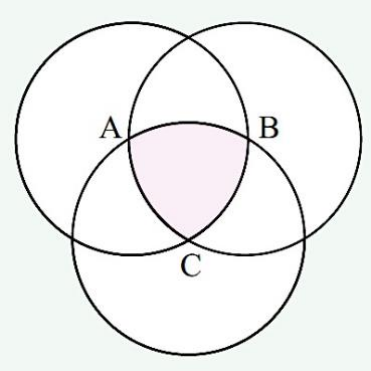
2. The diagram shows a circle of radius 5 cm.



Find the perimeter of the shaded region.

(Total 4 marks)

Q.3 Three circles with radius r are drawn as shown, each with its centre on the circumference of the other two circles. A, B and C are the centres of the three circles. Prove that an expression for the area of the shaded region is $A = \frac{r^2}{2}(\pi - \sqrt{3})$.



[10 marks]