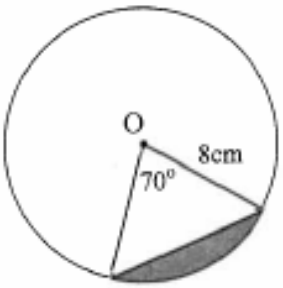
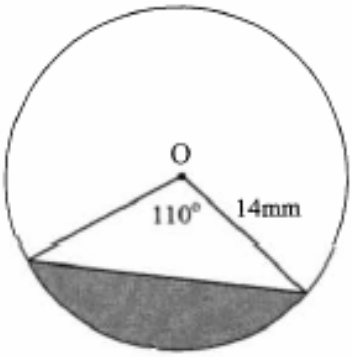
The Circle (2) - Sectors, Segments & Chords

1. Calculate the **area** of each shaded segment in the diagrams below.

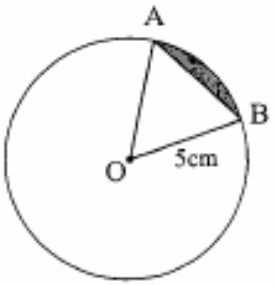
(a)



(b)



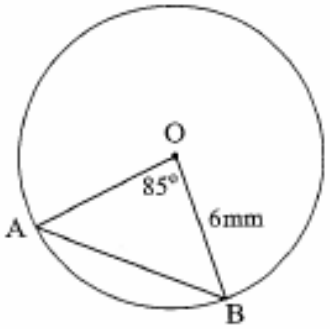
(c)



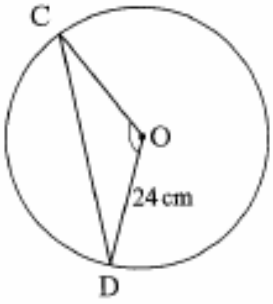
$\angle AOB = 60°$

2. Calculate the **length** of the chord in each diagram below.

(a)

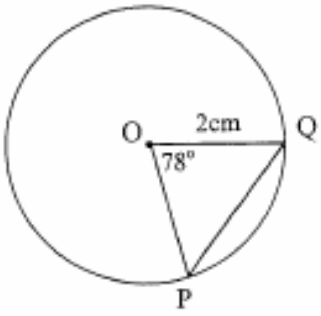


(b)



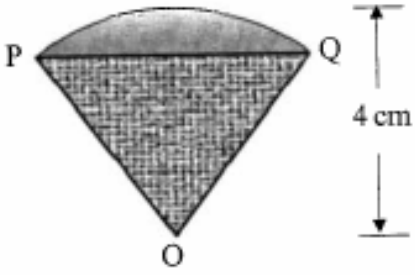
$\angle COD = 130°$

(c)



3. Calculate the **perimeter** of each segment in question 2.

4. The logo for a small ice-cream company is shown opposite. It is simply a sector of a circle with its centre at O.

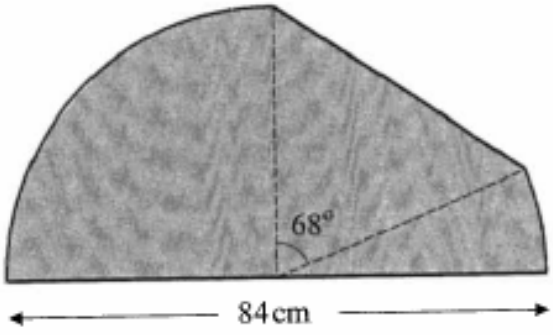


$\angle POQ = 72°$

(a) Calculate the perimeter of the logo.

(b) Calculate the area of the ice-cream part.

5. A designer table-top is shaped as a semi-circle with a segment removed as shown in the diagram.



From the information supplied calculate:

(a) the perimeter of the table-top;

(b) the area of the table-top.

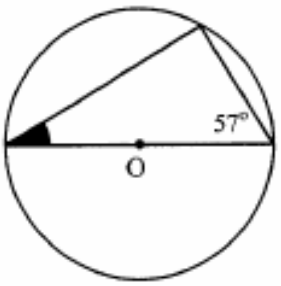
The Circle (4) - Angles in Circles

Copy and learn the following .....

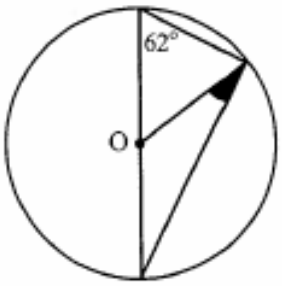
1. *Angles in a semi-circle equal 90°.*
2. *The angle between a tangent and a radius is 90°.*
3. *Look for isosceles triangles in all diagrams.*
4. *The angles in any triangle add up to 180°.*
5. *Two angles in a straight line add up to 180°.*
6. *Be aware of the tangent kite.*

Exercise1 : Find the size of the shaded angles in each diagram.
(O is the centre of each circle, PS and PT are tangents)

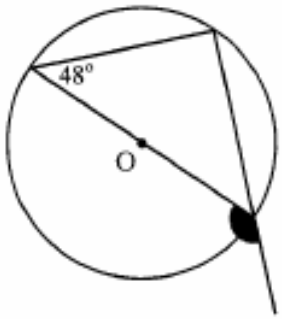
1.



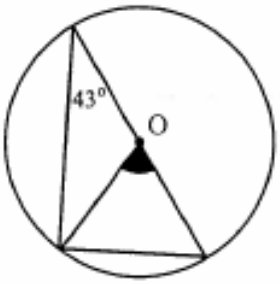
2.



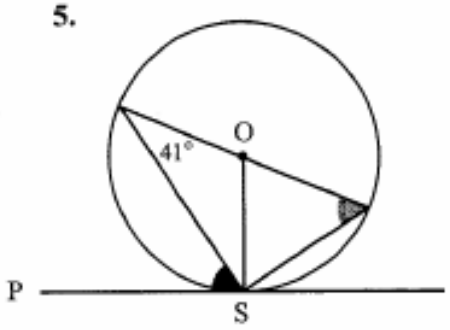
3.



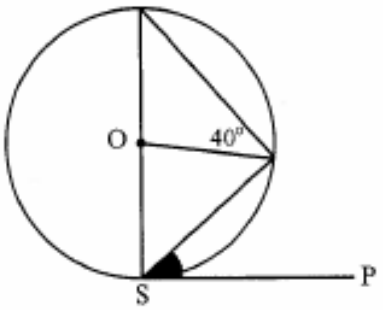
4.



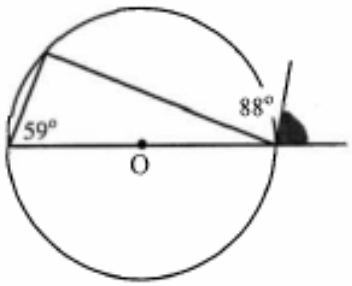
5.



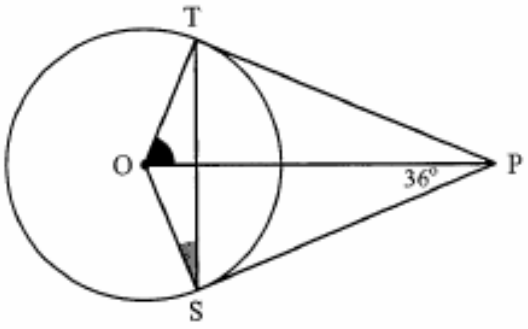
6.



7.

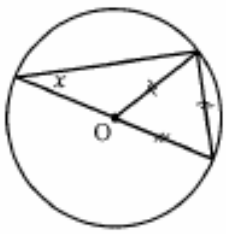


8.

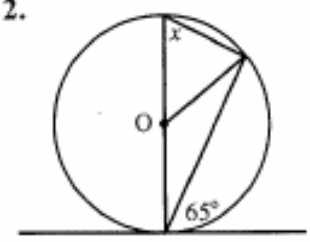


Exercise 2 : Calculate the size of angle x in each diagram below.

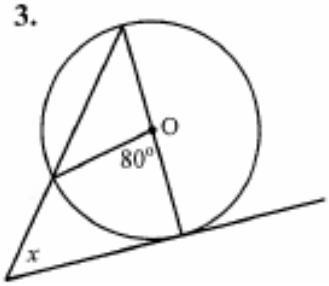
1.



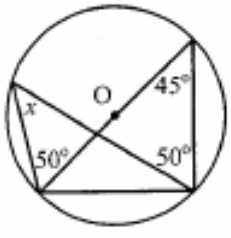
2.



3.



4.



The Circle (2)

1.	(a)	$9cm^2$	(b)	$96mm^2$	(c)	$2{\cdot}3cm^2$
2.	(a)	8·1mm	(b)	43·5cm	(c)	2·5cm
3.	(a)	17mm	(b)	97·9cm	(c)	5·2cm
4.	(a)	13cm	(b)	$2{\cdot}4cm^2$		
5.	(a)	213cm	(b)	$2541cm^2$		

The Circle (4)

Exercise 1

1.	33°	2.	28°	3.	138°
4.	86°	5.	49°, 49°	6.	40°
7.	61°	8.	36°, 54°		

Exercise 2

1.	30°	2.	65°
3.	50°	4.	45°