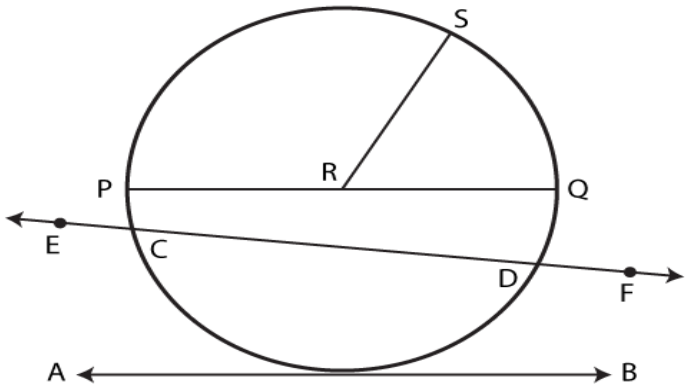
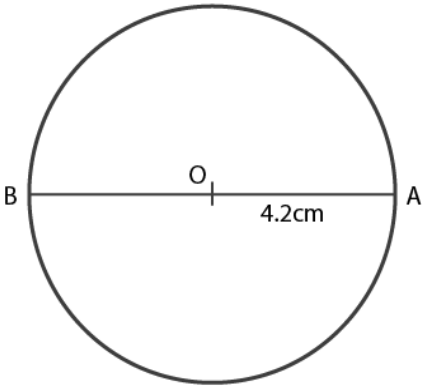
EXERCISE 29(A)

1. Use the figure given below to fill in the blanks:
(i) R is the …….. of the circle.
(ii) Diameter of a circle is ……
(iii) Tangent to a circle is ……
(iv) EF is a …….. of the circle
(v) ……. is a chord of the circle.
(vi) Diameter = 2 ×…….
(vii) …… is a radius of the circle.
(viii) If the length of RS is 5 cm, the length of PQ = ……
(ix) If PQ is 8 cm long, the length of RS = …….
(x) AB is a …… of the circle



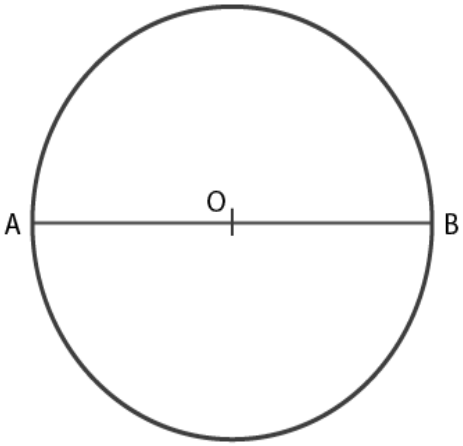
Solution:
(i) R is the **centre** of the circle
(ii) Diameter of a circle is **PQ**
(iii) Tangent to a circle is **AB**
(iv) EF is a **secant** of the circle
(v) **CD** is a chord of the circle
(vi) Diameter = 2 × **radius**
(vii) **RS** is a radius of the circle
(viii) If the length of RS is 5 cm, the length of PQ = **10 cm**
(ix) If PQ is 8 cm long, the length of RS = **4 cm**
(x) AB is a **tangent** of the circle

2. Draw a circle of radius 4.2 cm. Mark its centre as O. Take a point A on the circumference of the circle. Join AO and extend it till it meets point B on the circumference of the circle,
(i) Measure the length of AB.
(ii) Assign a special name to AB.
Solution:

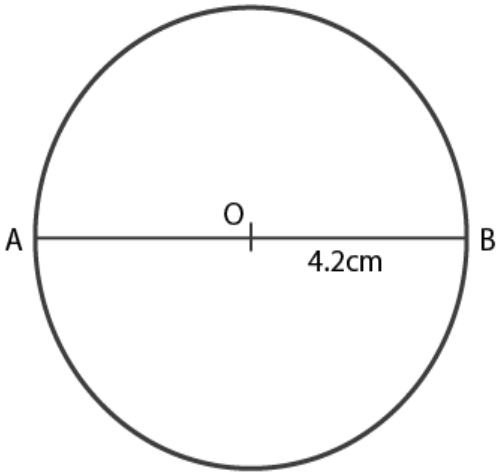


(i) By measurement the length of AB = 8.4 cm
(ii) AB is diameter of the circle

3. Draw circle with diameter:
(i) 6 cm
(ii) 8.4 cm
In each case, measure the length of the radius of the circle drawn.
Solution:
(i) AB is the diameter of circle
AB = 6 cm and
OA is the radius of the circle



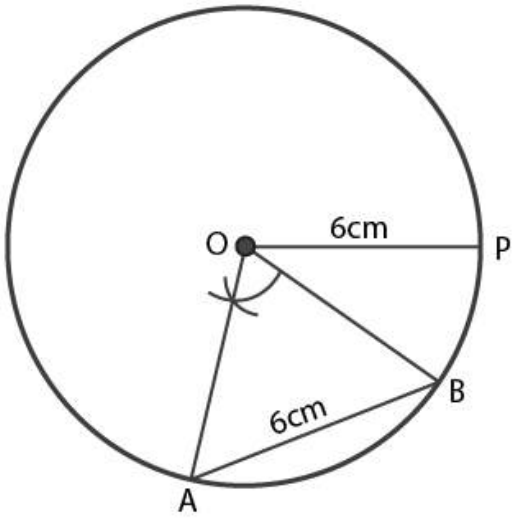
The radius of the circle is,
1 / 2 × 6 = 3 cm
Therefore, OA = OB = 3 cm
(ii) AB is the diameter of circle
AB = 8.4 cm



OA is the radius of circle
The radius of circle is,
1 / 2 × 8.4 = 4.2 cm
Therefore, OA = OB = 4.2 cm

4. Draw a circle of radius 6 cm. In the circle, draw a chord AB = 6 cm.
(i) If O is the centre of the circle, join OA and OB.
(ii) Assign a special name to △AOB
(iii) Write the measure of angle AOB.
Solution:

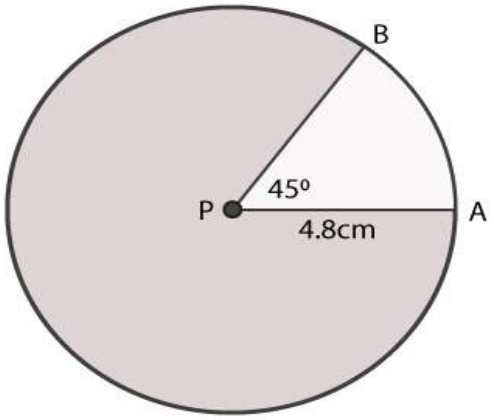
(i)



(ii) △AOB is an equilateral triangle
(iii) Since, △AOB is equilateral triangle
Hence, ∠AOB = 60^0

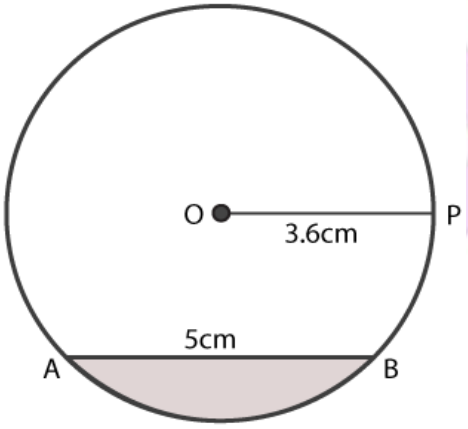
5. Draw a circle of radius 4.8 cm and mark its centre as P.

(i) Draw radii PA and PB such that ∠APB = 45^0
(ii) Shade the major sector of the circle
Solution:



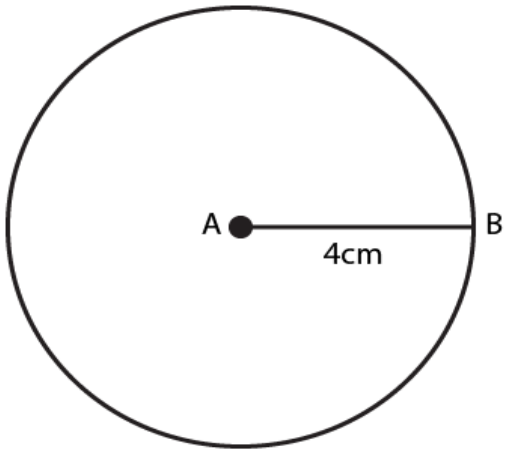
(i) PA is the radius of circle
PA = 4.8 cm
(ii) ∠APB = 45^0. P is the centre of the circle and PA and PB are radii of circle
(iii) Major sector of circle is shaded in the given figure

6. Draw a circle of radius 3.6 cm. In the circle, draw a chord AB = 5 cm. Now shade the minor segment of the circle.
Solution:



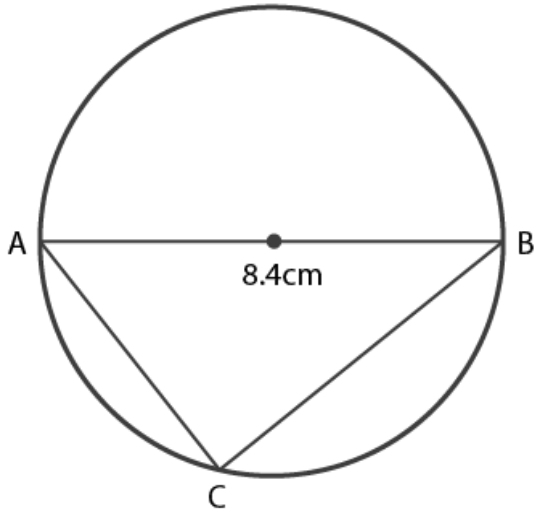
(i) OP is the radius of the circle i.e OP = 3.6 cm
AB is the chord of the circle i.e AB = 5 cm
(ii) Minor segment of the circle is shaded in the given circle

7. Mark two points A and B, 4 cm a part. Draw a circle passing through B and with A as a centre



Solution:
In the given figure A is the centre of the circle and
AB is the radius of the circle i.e AB = 4 cm

8. Draw a line AB = 8.4 cm. Now draw a circle with AB as diameter. Mark a point C on the circumference of the circle. Measure angle ACB.
Solution:



By measurement we get,
$\angle ACB = 90^0$