

ONLINE MATHS CLASS- X - 15 (23 / 07 /2021)

2 . CIRCLES - CLASS - 3 - WORKSHEET

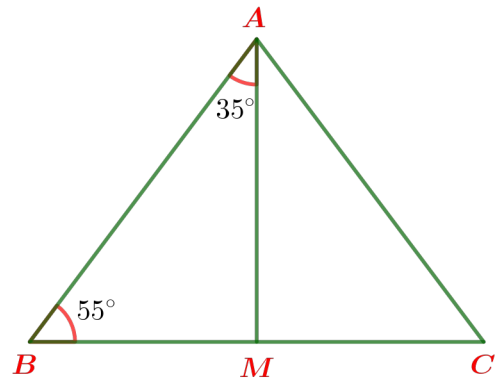
Important points

- If we join the ends of a diameter of a circle to a point on the circle, we get a right angle .
- Angle in a semicircle is right
- If a pair of lines drawn from the ends of a diameter of a circle are perpendicular to each other, then they meet on the circle .
- The angle formed by joining the end points of the diameter of a circle to a point inside the circle is greater than 90° , on the circle is 90° and outside the circle is less than 90°

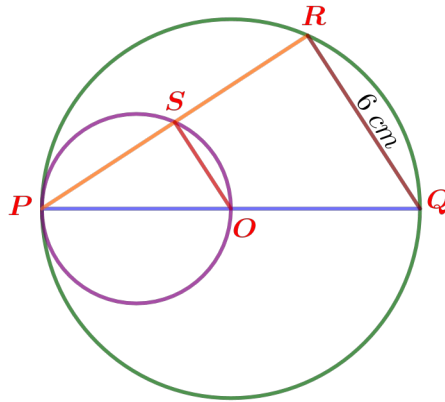
1. In the figure AM is the bisector of $\angle BAC$.

$$\angle BAM = 35^\circ, \angle ABM = 55^\circ$$

- What is the measure of $\angle AMB$?
- Find out whether the point M is inside the circle, on the circle or outside the circle if a circle is drawn with AB as diameter ?
- What is the measure of $\angle ACM$?
- Find out whether the point C is inside the circle, on the circle or outside the circle if a circle is drawn with AM as diameter ?



2.



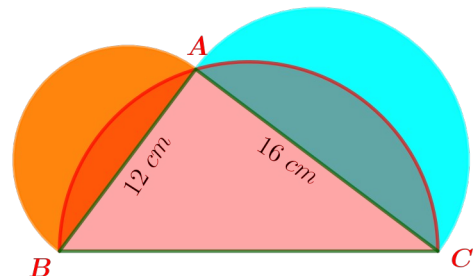
In the figure O is the centre of the larger circle and PR is a chord on it . The circle drawn with diameter OP cuts PR at S . The diameter of the larger circle is 10 cm and QR = 6cm

- What is the measure of $\angle PRQ$?
- What is the length of the line PR ?
- What is the measure of $\angle PSO$?
- What is the length of the line PS ?
- What is the length of the line OS ?

3. A is a point on the semicircle with diameter BC .

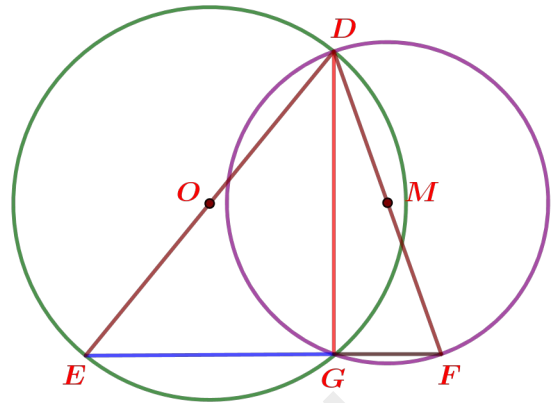
$$AB = 12 \text{ cm} , AC = 16 \text{ cm} .$$

- What is the measure of $\angle BAC$?
- What is the area of the semicircle with diameter AB ?
- What is the area of the semicircle with diameter AC?
- What is the length of the line BC ?
- What is the area of the semicircle with diameter BC ?
- What is the relation connecting the areas of the semicircles with diameters AB , BC and AC?



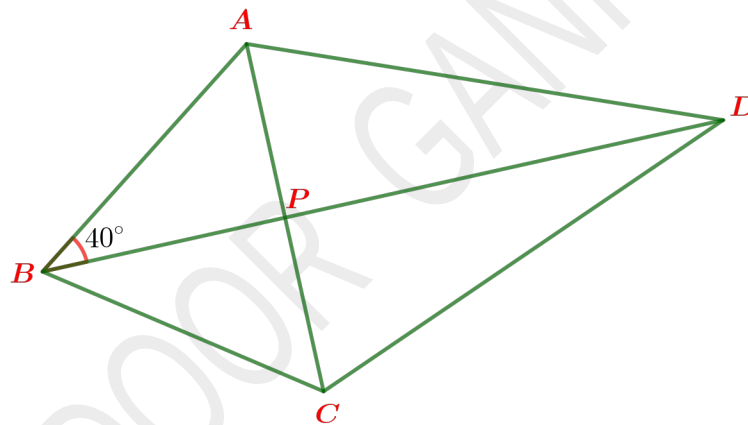
4. In the figure circles with centres O and M intersect at the points D and G

$DE = 15 \text{ cm}$, $DG = 12 \text{ cm}$, $DF = 13 \text{ cm}$.



- What is the measure of $\angle DGE$?
- What is the length of the line EG ?
- What is the length of the line GF ?
- What is the length of the line EF ?
- What is the length of line joining the centres of the circles ?

5.



In the figure $AB = BC$, $AD = CD$, $\angle ABD = 40^\circ$

- Check whether the sides of triangle ABD are equal to the sides of triangle BCD ?
- What is the measure of $\angle CBD$?
- Check whether the angles of triangle APB are equal to the angles of triangle BPC ?
- What is the measure of $\angle APB$?
- Find out whether the point P is inside the circle , on the circle or outside the circle if a circle is drawn with BC as diameter ?