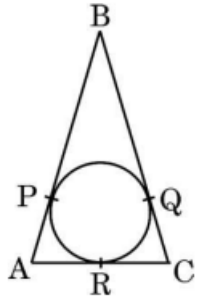




2023-30/5/1- 1 MARK-

In the given figure, $AB = BC = 10$ cm. If $AC = 7$ cm, then the length of BP is :



- (a) 3.5 cm (b) 7 cm
(c) 6.5 cm (d) 5 cm

2022-30/1/1- 4 MARK

In Figure 1, a triangle ABC with $\angle B = 90^\circ$ is shown. Taking AB as diameter, a circle has been drawn intersecting AC at point P . Prove that the tangent drawn at point P bisects BC .

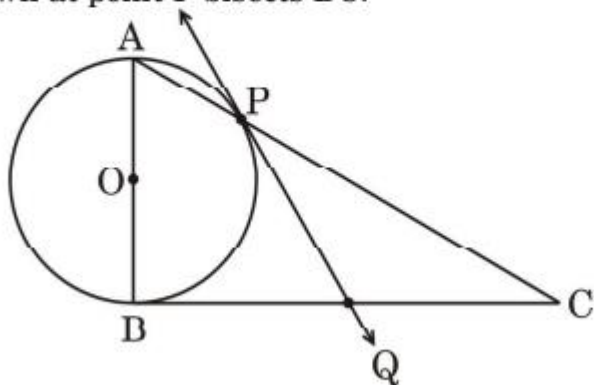
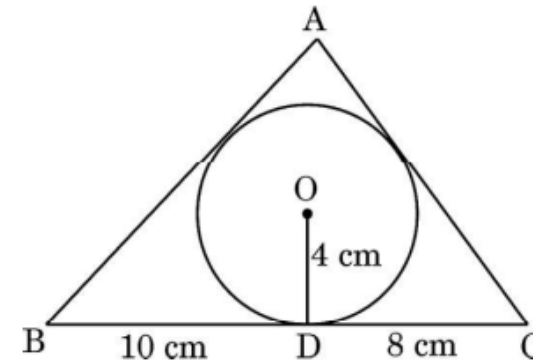


Figure 1

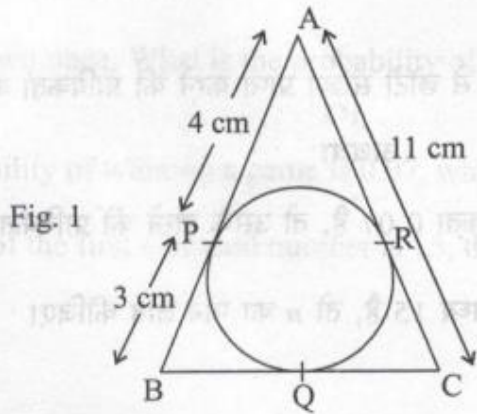
2023-30/5/1- 5 mark

A triangle ABC is drawn to circumscribe a circle of radius 4 cm such that the segments BD and DC are of lengths 10 cm and 8 cm respectively. Find the lengths of the sides AB and AC , if it is given that $\text{area } \Delta ABC = 90 \text{ cm}^2$.



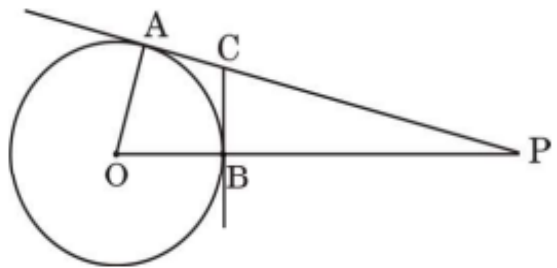
2022-30/1/1- 1 MARK

In Fig. 1, ΔABC is circumscribing a circle, the length of BC is _____ cm.



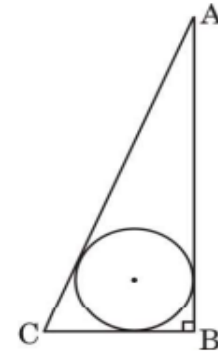
2022-30/3/1 – 4 MARK

In Figure 4, O is centre of a circle of radius 5 cm. PA and BC are tangents to the circle at A and B respectively. If $OP = 13$ cm, then find the length of tangents PA and BC .



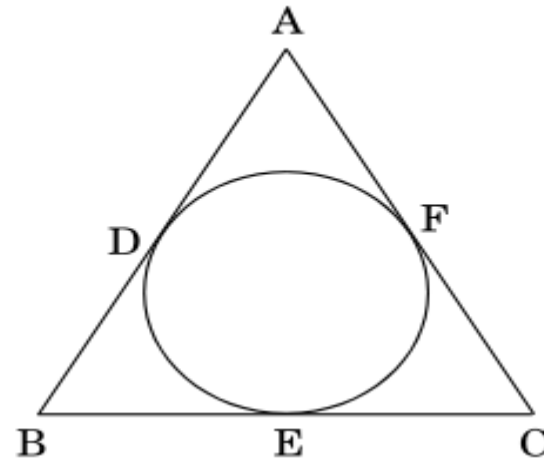
2022-30-1/2- 4 MARK

In Figure 1, a right triangle ABC in which $\angle B = 90^\circ$, $AB = 12$ cm and $BC = 5$ cm is shown. Find the radius of the circle inscribed in the triangle ABC .



m_f_2017 – 2 MARK

In the given figure, if $AB = AC$, prove that $BE = EC$.



2023-30/4/1- 4 MARK

- (a) In Fig.-2, if a circle touches the side QR of ΔPQR at S and extended sides PQ and PR at M and N, respectively, then

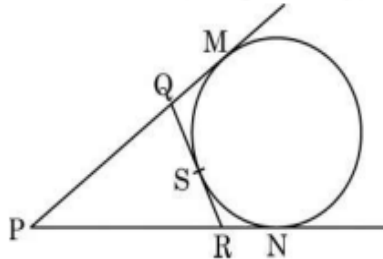


Fig. 2

prove that $PM = \frac{1}{2}(PQ + QR + PR)$

OR

- (b) In Fig. 3, a triangle ABC is drawn to circumscribe a circle of radius 4 cm such that the segments BD and DC into which BC is divided by the point of contact D are of lengths 6 cm and 8 cm respectively. If the area of ΔABC is 84 cm^2 , find the lengths of sides AB and AC.

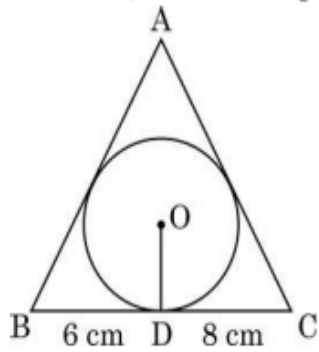


Fig. 3

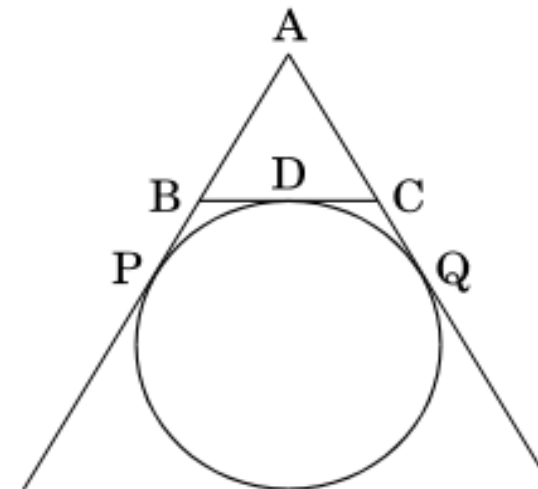
2020-30/2/1- 3 MARK

If a circle touches the side BC of a triangle ABC at P and extended sides AB and AC at Q and R, respectively, prove that

$$AQ = \frac{1}{2} (BC + CA + AB)$$

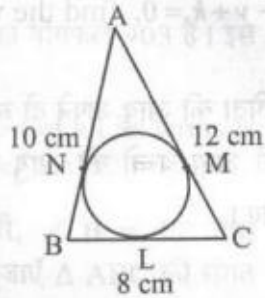
2020-30/5/1 – 2 MARK

In Figure-7, find the perimeter of ΔABC , if $AP = 12 \text{ cm}$.



2019-30/1/2- 1 MARK

In Fig. 4, a circle is inscribed in a ΔABC having sides $BC = 8$ cm, $AB = 10$ cm and $AC = 12$ cm. Find the lengths BL , CM and AN .



m_2015 – 2 MARK

In Figure 4, a triangle ABC is drawn to circumscribe a circle of radius 3 cm, such that the segments BD and DC are respectively of lengths 6 cm and 9 cm. If the area of ΔABC is 54 cm^2 , then find the lengths of sides AB and AC.

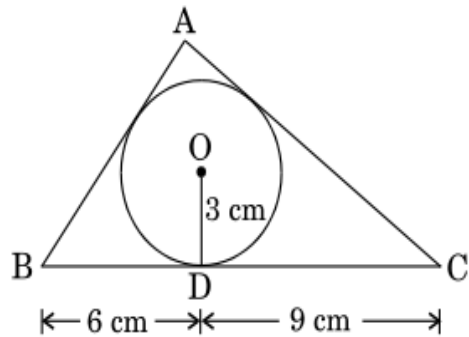
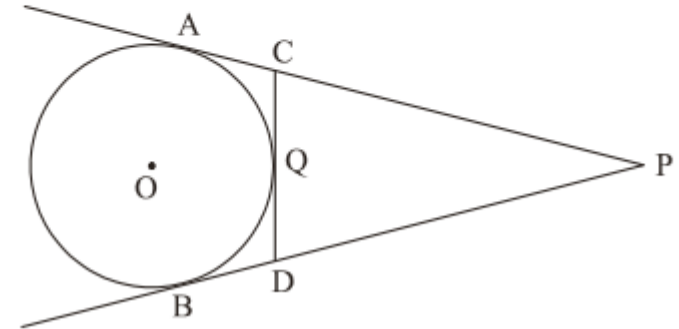


Figure 4

MD 2017 – 2 MARK

In the given figure, PA and PB are tangents to the circle from an external point P. CD is another tangent touching the circle at Q. If $PA = 12$ cm, $QC = QD = 3$ cm, then find $PC + PD$.



MD2016- 2 MARK

In Fig. 2, a circle is inscribed in a ΔABC , such that it touches the sides AB , BC and CA at points D , E and F respectively. If the lengths of sides AB , BC and CA are 12 cm, 8 cm and 10 cm respectively, find the lengths of AD , BE and CF .

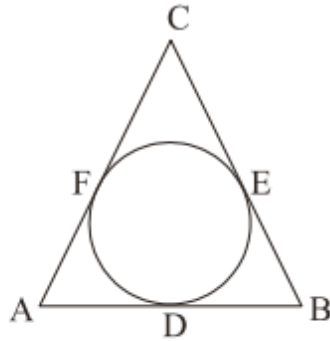


Fig. 2

MD2016- 4 MARK

In Fig. 8, O is the centre of a circle of radius 5 cm. T is a point such that $OT = 13$ cm and OT intersects circle at E . If AB is a tangent to the circle at E , find the length of AB , where TP and TQ are two tangents to the circle.

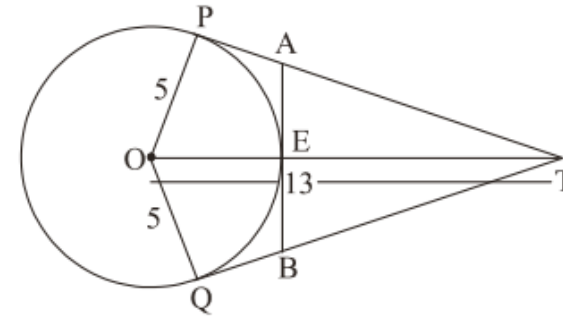


Fig. 8