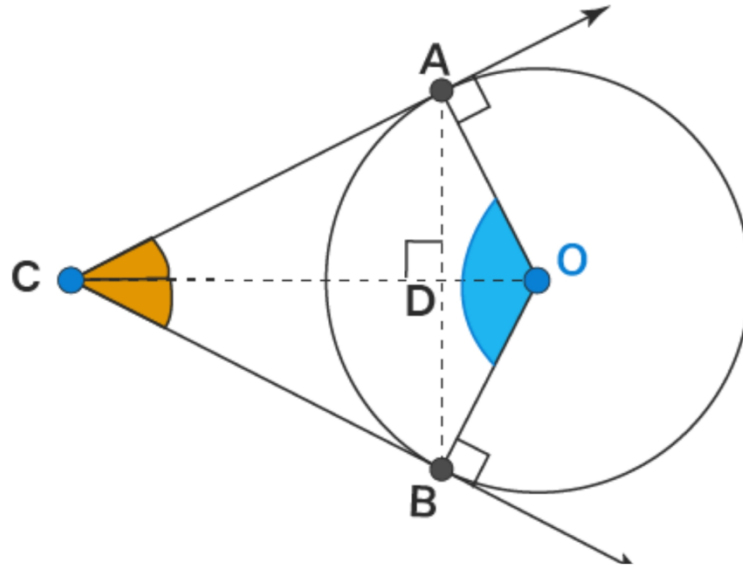




MATHEMATICS - 10TH

IMPORTANT MCQ'S - MATHS (10TH GRADE)



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Material Curated by
Er. Sonal Agrawal Sir
Ex. Scientist , BARC Mumbai

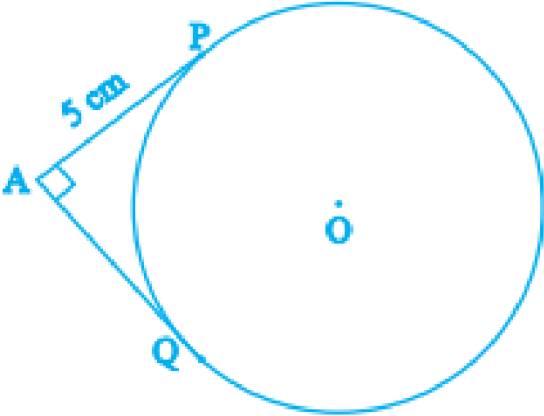


10th - Maths

SN		Marks
1	A tangent to a circle is a line that intersects the circle at only one point . TRUE or FALSE ? (a) TRUE (b) FALSE	1
2	The tangent at any point of a circle is perpendicular to the radius through the point of contact . TRUE or FALSE ? (a) TRUE (b) FALSE	1
3	At any point on a circle there can be one and only one tangent . TRUE OR FALSE? (a) TRUE (b) FALSE	1
4	How many tangents can a circle have? (a) 0 (b) 1 (c) 2 (d) INFINITE	1
5	What is a line intersecting a circle in two points called? (a) Tangent (b) Radius (c) Secant (d) Diameter	1
6	The length of a tangent from a point A at distance 5 cm from the centre of the circle is 4 cm. Find the radius of the circle. (a) 5 cm (b) 7 cm (c) 9 cm (d) 3 cm	2
7	Two concentric circles are of radii 5 cm and 3 cm . Find the length of the chord of the larger circle which touches the smaller circle . (a) 3 cm (b) 8 cm (c) 5 cm (d) 7 cm	2
8	State true or false. Tangent is perpendicular to the radius through the point of contact. (a) TRUE (b) FALSE	1

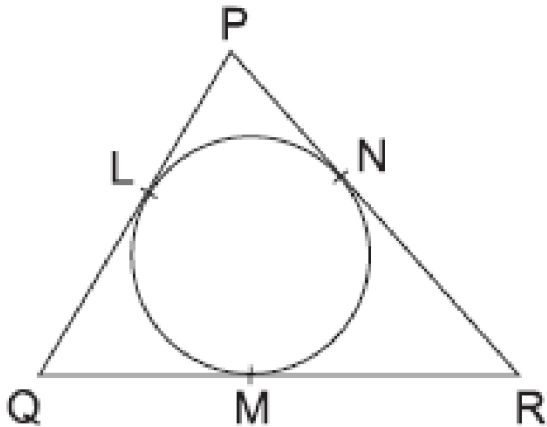




9	 <p>In the above figure, the pair of tangents AP and AQ drawn from an external point A to a circle with centre O are perpendicular to each other and length of each tangent is 5 cm. Then the radius of the circle is</p> <p>(a) 10 cm (b) 7.5 cm (c) 5 cm (d) 2.5 cm</p>	1
10	<p>From an external point P, two tangents, PA and PB are drawn to a circle with centre O. At one point E on the circle tangent is drawn which intersects PA and PB at C and D, respectively. If PA = 10 cm, what is the perimeter of the triangle PCD?</p> <p>(a) 10 cm (b) 20 cm (c) 15 cm (d) 25 cm</p>	2
11	<p>State TRUE or FALSE: The tangent at any point of a circle is perpendicular to the radius through the point of contact.</p> <p>(a) TRUE (b) FALSE</p>	1
12	<p>State TRUE or FALSE: There is one and only one tangent at any point on the circumference of a circle.</p> <p>(a) TRUE (b) FALSE</p>	1
13	<p>A tangent PQ at a point P of a circle of radius 5 cm meets a line through the centre O at a point Q so that OQ is 13 cm. Find the length of PQ.</p> <p>(a) 10 cm (b) 12 cm (c) 14 cm (d) 16 cm</p>	1





14	<p>From a point P, 10 cm away from the centre of a circle, a tangent PT of length 8 cm is drawn. Find the radius of the circle.</p> <p>(a) 8 cm (b) 10 cm (c) 6 cm (d) 4 cm</p>	1
15	 <p>From the given figure, a circle is inscribed in a triangle PQR. If PQ is 10 cm, QR is 8 cm and PR is 12 cm, find the lengths of QM .</p> <p>(a) 2 cm (b) 3 cm (c) 8 cm (d) 11 cm</p>	1
16		1





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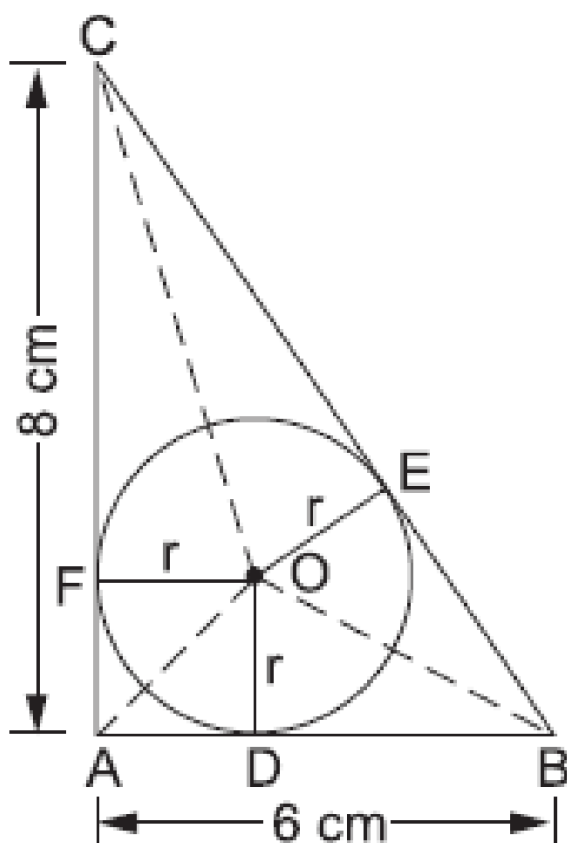
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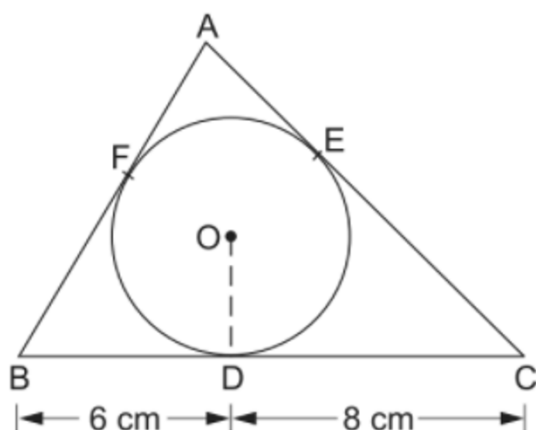
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From the given figure, ABC is a right-angled triangle with AB is 6 cm and AC is 8 cm. A circle with centre O has been inscribed inside the triangle. Calculate the value of r , the radius of the inscribed circle.

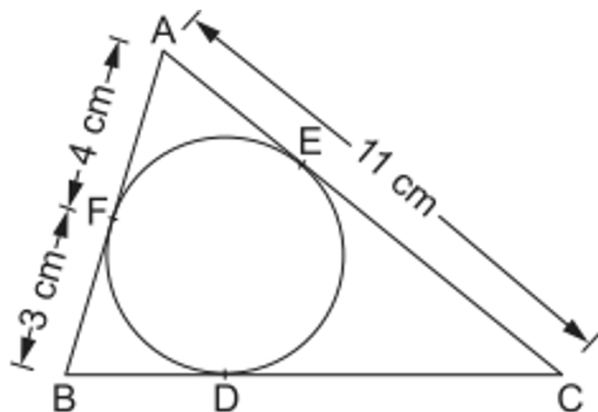
- (a) 4 cm (b) 8 cm
(c) 3 cm (d) 2 cm

17



1

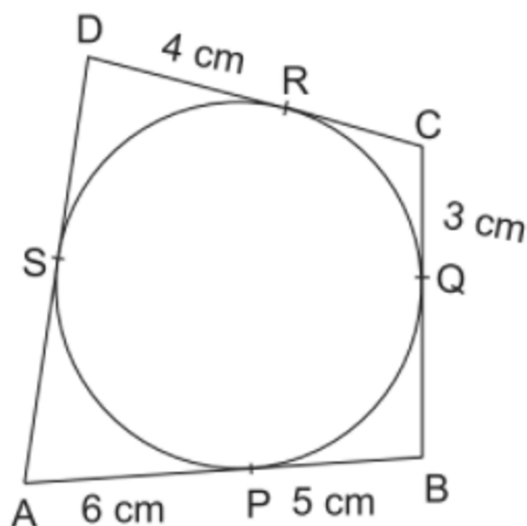




From the given figure, the length of BC is

- (a) 7 cm (b) 10 cm
(c) 14 cm (d) 15 cm

21



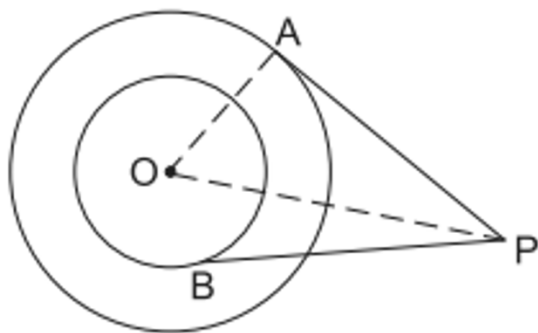
From the given figure, quad. ABCD is circumscribed, touching the circle at P, Q, R and S. If $AP = 6$ cm, $BP = 5$ cm, $CQ = 3$ cm and $DR = 4$ cm then perimeter of quad. ABCD is

- (a) 18 cm (b) 27 cm
(c) 36 cm (d) 32 cm

22

1

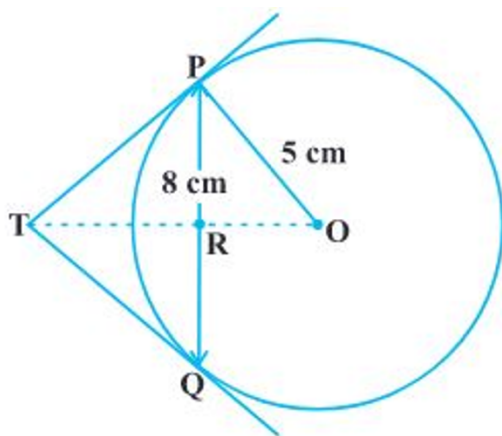




From the given figure, O is the centre of two concentric circles of radii 5 cm and 3 cm. From an external point P tangents PA and PB are drawn to these circles. If PA = 12 cm then PB is equal to

- (a) $5\sqrt{2}$ cm (b) $3\sqrt{5}$ cm
(c) $4\sqrt{10}$ cm (d) $5\sqrt{10}$ cm

23



PQ is a chord of length 8 cm of a circle of radius 5 cm. The tangents at P and Q intersect at a point T (see the above image). Find the length TP.

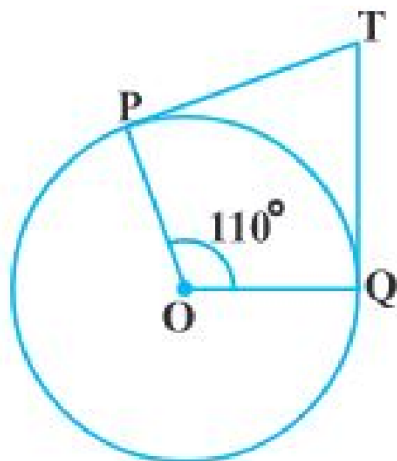
- (a) $\frac{17}{3}$ (b) $\frac{22}{3}$
(c) $\frac{13}{3}$ (d) $\frac{20}{3}$

5

24

2

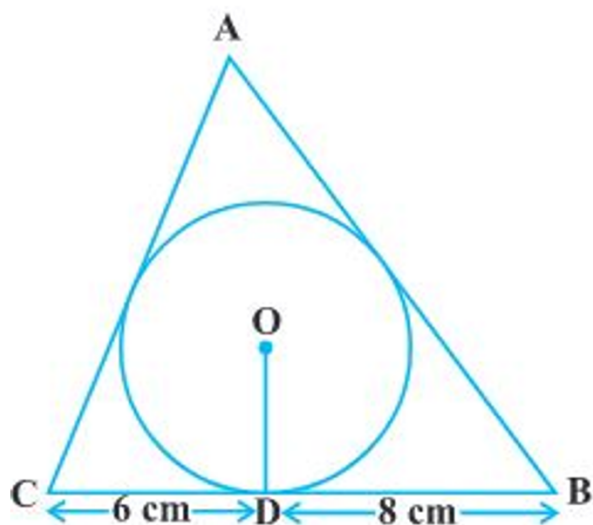




In the above figure , if TP and TQ are the two tangents to a circle with centre O so that $\angle POQ = 110^\circ$, then $\angle PTQ$ is equal to

- (a) 60° (b) 70°
(c) 80° (d) 90°

25



In the above figure , 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 8 cm and 6 cm respectively . Find the side AB .

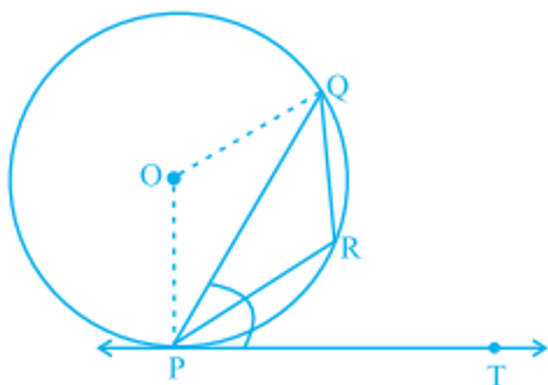
- (a) 13 cm (b) 15 cm
(c) 10 cm (d) 18 cm

2

26

1

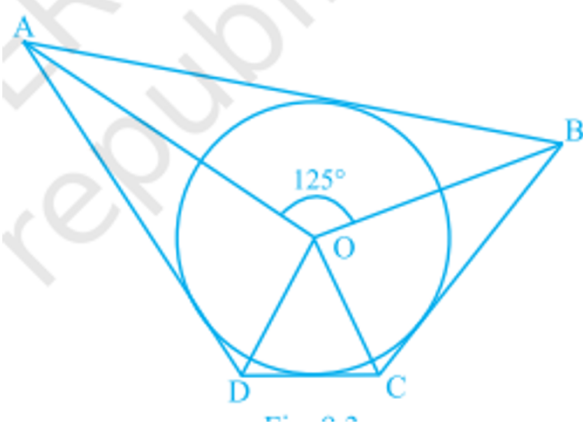




In the above figure, PQ is a chord of a circle and PT is the tangent at P such that $\angle QPT = 60^\circ$. Then $\angle PRQ$ is equal to

- (a) 135° (b) 150°
(c) 120° (d) 110°

27



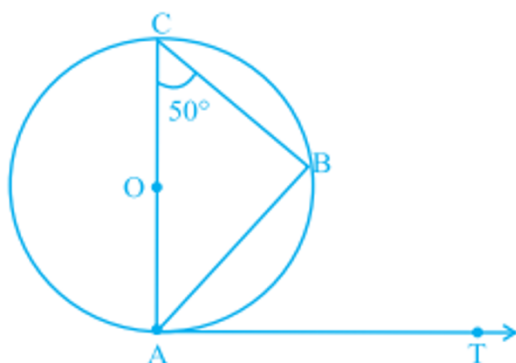
In the above figure, if $\angle AOB = 125^\circ$, then $\angle COD$ is equal to

- (a) 62.5° (b) 45°
(c) 35° (d) 55°

28

2

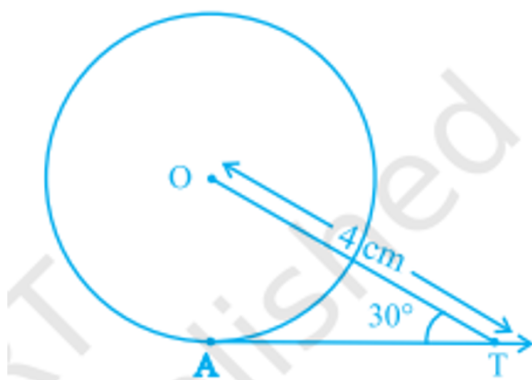




In the above figure, AB is a chord of the circle and AOC is its diameter such that $\angle ACB = 50^\circ$. If AT is the tangent to the circle at the point A, then $\angle BAT$ is equal to

- (a) 65° (b) 60°
(c) 50° (d) 40°

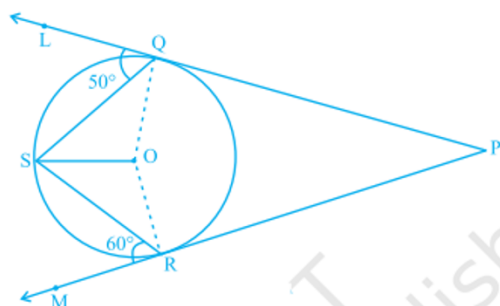
29



In the above figure, AT is a tangent to the circle with centre O such that $OT = 4$ cm and $\angle OTA = 30^\circ$. Then AT is equal to

- (a) 4 cm (b) 2 cm
(c) $2\sqrt{3}$ cm (d) $4\sqrt{3}$ cm

30



2



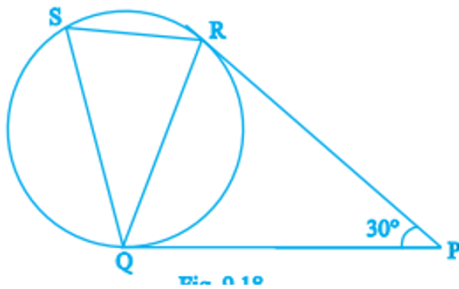


According to the above figure, Is it TRUE or FALSE that PQL and PRM are tangents to the circle with centre O at the points Q and R, respectively and S is a point on the circle such that $\angle SQL = 50^\circ$ and $\angle SRM = 60^\circ$. Then $\angle QSR$ is equal to 40° ?

(a) TRUE

(b) FALSE

31



2

In the above figure, tangents PQ and PR are drawn to a circle such that $\angle RPQ = 30^\circ$. A chord RS is drawn parallel to the tangent PQ. What is the value of $\angle RQS$?

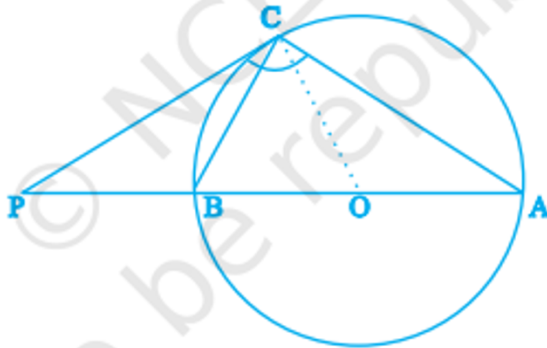
(a) 25°

(b) 30°

(c) 40°

(d) 50°

32



2

In the above figure, The tangent at a point C of a circle and a diameter AB when extended intersect at P. If $\angle PCA = 110^\circ$, what is the value of $\angle CBA$?

(a) 70°

(b) 80°

(c) 90°

(d) 75°



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- Trained More then 1 lakh students online and Offline - Bilaspur, Bhilai, Delhi



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MATHEMATICS - 10TH

IMPORTANT MCQ'S – MATHS (10TH GRADE)

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9	10	11	12	13	14	15	16
C	B	A	A	B	C	B	D
17	18	19	20	21	22	23	24
A	C	C	B	C	C	D	B
25	26	27	28	29	30	31	32
B	C	D	C	C	B	B	A
33	34	35	36	37	38	39	40
-	-	-	-	-	-	-	-
41	42	43	44	45	46	47	48
-	-	-	-	-	-	-	-