MATHS

BOOKS - UNITED BOOK HOUSE

Theorem related to Angle in a Circle

Exercise

1. If O is the circumcentre of $\triangle ABC$, then the value of $(\angle OBC + \angle BAC)$ is

A. 60°

B. 75°

C. 90°

D. 100°

Answer:

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2. Two chords AB and CD of a circle with centre O intersect each other at the point P. If $\angle AOD = 20^\circ$ and $\angle BOC = 30^\circ$, then $\angle BPC$ is equal to?

A. 25°

B. 40°

C. 90°

D. 105°

Answer:

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3. O is the circumcentre of $\triangle ABC$. If $\angle BAC = 85^\circ$, $\angle BCA = 55^\circ$, then the value of $\angle OAC$ is

A. 45°

B. 60°

C. 50°

D. 55°

Answer:

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4. AB is a diameter of a circle with centre at O. C is any point on the circle. If $\angle BOC = 110^\circ$, then $\angle BAC$ =

A. 55°

B. 65°

C. 60°

D. 45°

Answer:

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5. O is the incentre of $\triangle ABC$~ and if angleBOC = 140$then$angleBAC`=?

A. 30°

B. 40°

C. 50°

D. 60°

Answer:

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6. Two chords AB and CD of a circle intersect at the point P, which is inside the circle and O is

the centre of the circle. If $\angle AOC = 55^\circ$, and $\angle BOD = 45^\circ$, then $\angle APC$ =

A. 40°

B. 50°

C. 60°

D. 80°

Answer:

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7. AB and AC are two chords perpendicular to each other. If the radius of the circle = 2r unit, then the length of chord BC is

A. 2r unit

B. 3r unit

C. $3\sqrt{3}runit$

D. 4r unit.

Answer:

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8. AB is a diameter of a circle with centre at O. Chord PQ intersects AB in such a way that $\angle AOP = 130^\circ$. The value of $\angle PQB$ is

A. 75°

B. 65°

C. 25°

D. 15°

Answer:

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9. AD and AC are two equal chords of a circle with centre O. AB is the diameter of the circle. If $\angle COD = 140^\circ$, then $\angle OBC$ =

A. 55°

B. 60°

C. 65°

D. 70°

Answer:

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10. AB is a diameter of a circle with centre at O.

If chord $CD \perp AB$ and $\angle CAD = 80^\circ$, then $\angle ADC$ =

A. 45°

B. 50°

C. 55°

D. 80°

Answer:

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11. If O be the circumcentre of a triangle PQR and $\angle QOR = 110^\circ$, $\angle OPR = 25^\circ$, then the measure of $\angle PRQ$ is____

A. 65°

B. 50°

C. 55°

D. 60°

Answer:

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12. In the adjacent figure, AB be diameter of a circle whose centre is O. If $\angle AOE = 150^\circ$, $\angle DAO = 51^\circ$ then the measure of $\angle CBE$ is___

A. 115°

B. 110°

C. 105°

D. 120°

Answer:

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13. Two chords AB and CD of cicle whose centre is O, meet at the point P and $\angle AOC = 50^\circ$, $\angle BOD = 40^\circ$. Then the measure of $\angle BPD$ is

A. 40°

B. 45°

C. 60°

D. 75°

Answer:

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14. O is the centre and ABC subtends an angle of 130° at O. AB is extended to P. Then $\angle PBC$ is

A. 75°

B. 70°

C. 65°

D. 80°

Answer:

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15. Two chords AB, CD of a circle with centre O intersect each other at P. $\angle ADP = 23^\circ$ and $\angle APC = 70^\circ$, then the $\angle BCD$ is

A. 45°

B. 47°

C. 57°

D. 67°

Answer:

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16. ABCD is a quadrilateral inscribed in a circle with centre O. If $\angle COD = 120^\circ$ and $\angle BAC = 30^\circ$, then BCD is____

A. 90°

B. 120°

C. 75°

D. 60°

Answer:

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17. ABCD is cyclic trapezium such that AD||BC, If $\angle ABC = 70^\circ$ then the value of $\angle BCD$ is___

A. 60°

B. 70°

C. 40°

D. 80°

Answer:

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18. If an exterior angle of a cyclic quadrilateral be 50°, then the interior opposite angle is___

A. 40°

B. 50°

C. 90°

D. 130°

Answer:

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19. ABCD is a cyclic trapezium with AD∥BC. If ∠B=70 then determine other three angles of the trapezium.

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20. A cyclic quadrilateral ABCD is such that AB = BC, AD = DC, $AC \perp BD$, $\angle CAD = \theta$, then

the angle $\angle ABC$ equals___

A. $\frac{\theta}{2}$

B. θ

C. $\frac{3\theta}{2}$

D. 2θ

Answer:

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21. If ABCD be a cyclic quadrilateral in which $\angle A = 4x^\circ$, $\angle B = 7x^\circ$, $\angle C = 5y^\circ \& \angle D = y^\circ$, then x, y is___

A. 3 : 4

B. 4 : 3

C. 5 : 4

D. 4 : 5

Answer:

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22. ABCD is a cyclic quadrilateral and AD is a diameter. If $\angle DAC = 55^\circ$ then value of $\angle ABC$ is____

A. 35°

B. 55°

C. 125°

D. 145°

Answer:

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23. ABCD is a cyclic quadrilateral. AB and DC are produced to meet at P. If $\angle ADC = 70^\circ$ and $\angle DAB = 60^\circ$, then $\angle PBC + \angle PCB$ is equals___

A. 130°

B. 150°

C. 155°

D. 180°

Answer:

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24. O and C are respectively the orthocentre and circumcentre of an acute angle triangle PQR. The points P and Q are joined and produced to meet the side QR ats. If $\angle PQS = 60^\circ$ and $\angle QCR = 130^\circ$ then $\angle RPS =$

A. 30°

B. 35°

C. 100°

D. 60°

Answer:

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