WINTER BREAK HW(CLASS-9)

1) If the perimeter of an equilateral triangle is 180 cm. Then its area will be:

a. 900 cm²   b. 900√3 cm²   c. 300√3 cm²   d. 600√3 cm²

2) The sides of a triangle are 122 m, 22 m and 120 m respectively. The area of the triangle is:

a. 1320 sq.m   b. 1300 sq.m   c. 1400 sq.m   d. 1420 sq.m

3) The sides of a triangle are in the ratio 12: 17: 25 and its perimeter is 540 cm. The area is:

a. 1000 sq.cm   b. 5000 sq.cm   c. 9000 sq.cm   d. 8000 sq.cm

4) The center of the circle lies in_____ of the circle.

a. Interior   b. Exterior   c. Circumference   d. None of the above

5) The longest chord of the circle is:
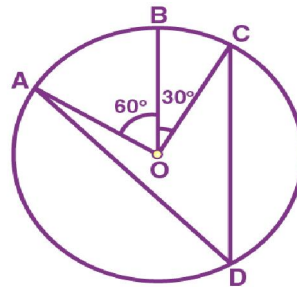
a. Radius   b. Arc   c. Diameter   d. Segment

6) Equal _____ of the congruent circles subtend equal angles at the centers.

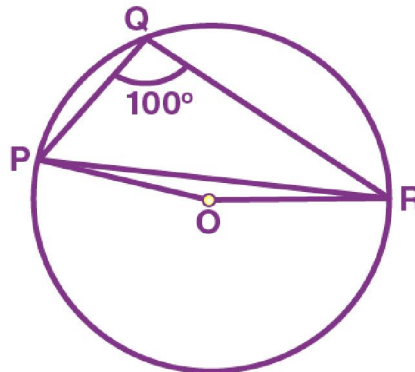a. Segments   b. Radii   c. Arcs   d. Chords

7) In the below figure, the value of ∠ADC is:

a. 60°

b. 30°

c. 45°

d. 55°

8) In the given figure, find angle OPR.

a. 20°

b. 15°

c. 12°

d. 10°

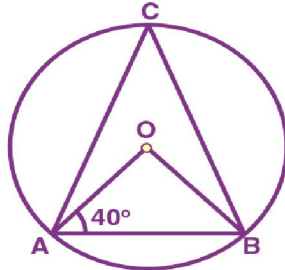**9) In the given figure, ∠AOB = 90⁰ and ∠ABC = 30⁰, then ∠CAO is equal to:**

(a) 30⁰

(b) 45⁰

(c) 60⁰

(d) 90⁰
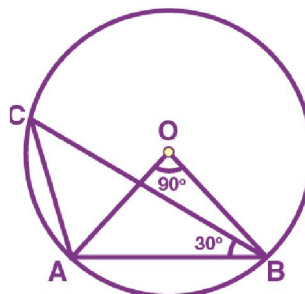
10) ABCD is a cyclic quadrilateral such that AB is a diameter of the circle circumscribing it and ∠ADC = 140⁰, then ∠BAC is equal to:

(a) 30º
(b) 40º
(c) 50º
(d) 80º
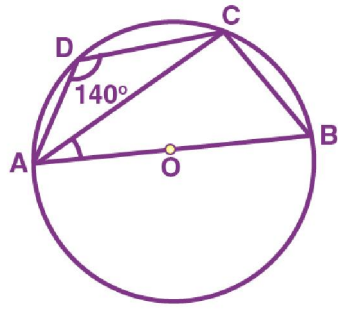
11) In the given figure, if ∠OAB = 40º, then ∠ACB is equal to

(a) 40º
(b) 50º
(c) 60º
(d) 70º

12) In the given figure, if ∠ABC = 20º, then ∠AOC is equal to:

(a) 10º
(b) 20º
(c) 40º
(d) 60º
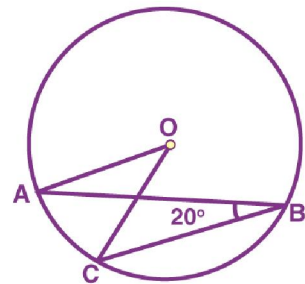
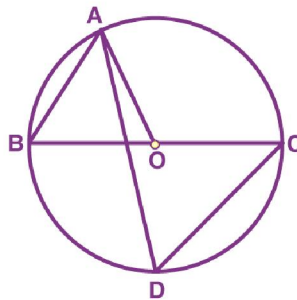**13) In the given figure, if OA = 5 cm, AB = 8 cm and OD is perpendicular to AB, then CD is equal to:**

(a) 2 cm
(b) 3 cm
(c) 4 cm
(d) 5 cm
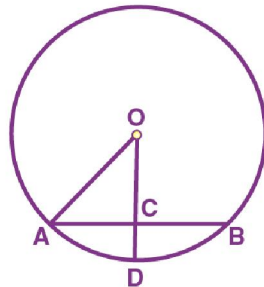
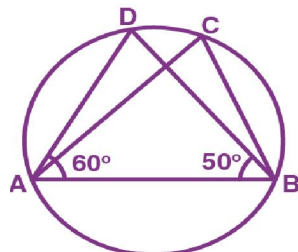**14) In the given figure, BC is the diameter of the circle and ∠BAO = 60º. Then ∠ADC is equal to**

(a) 30º
(b) 45º
(c) 60º
(d) 120º

15) In the given figure, if ∠DAB = 60º, ∠ABD = 50º, then ∠ACB is equal to:

(a) 50º
(b) 60º
(c) 70º
(d) 80º

16) In the given figure, if AOB is a diameter of the circle and AC = BC, then ∠CAB is equal to:

(a) 30º
(b) 45º
(c) 60º
(d) 90º
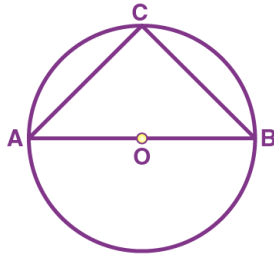
17) The quadrilateral whose all its sides are equal and angles are equal to 90 degrees, it is called:

a. Rectangle   b. Square   c. Kite   d. Parallelogram

18) The sum of all the angles of a quadrilateral is equal to:

a. 180°   b. 270°   c. 360°   d. 90°

19) A trapezium has:

a. One pair of opposite sides parallel   b. Two pairs of opposite sides parallel to each other

c. All its sides are equal   d. All angles are equal

20) A rhombus can be a:

a. Parallelogram   b. Trapezium   c. Kite   d. Square

21) A diagonal of a parallelogram divides it into two congruent:

a. Square   b. Parallelogram   c. Triangles   d. Rectangle

22) In a parallelogram, opposite angles are:

a. Equal   b. Unequal   c. Cannot be determined   d. None of the above

23) The diagonals of a parallelogram:

a. Equal   b. Unequal   c. Bisect each other   d. Have no relation

24) Each angle of the rectangle is:

a. More than 90°   b. Less than 90°

c. Equal to 90°   d. Equal to 45°

25) The angles of a quadrilateral are in the ratio 4: 5: 10: 11. The angles are:

a. 36°, 60°, 108°, 156°   b. 48°, 60°, 120°, 132°

c. 52°, 60°, 122°, 126°   d. 60°, 60°, 120°, 120°

26) Three angles of a quadrilateral are 75º, 90º and 75º. The fourth angle is

(a) 90º   (b) 95º   (c) 105º   (d) 120º

27) ABCD is a rhombus such that ∠ACB = 40º. Then ∠ADB is

(a) 40º   (b) 45º   (c) 50º   (d) 60º

28) Which of the following is not a quadrilateral?

(a) Kite   (b) Square   (c) Triangle   (d) Rhombus

29) In triangle ABC, if AB=BC and ∠B = 70°, ∠A will be:

a. 70°   b. 110°   c. 55°   d. 130°

30) For two triangles, if two angles and the included side of one triangle are equal to two angles and the included side of another triangle. Then the congruency rule is:

a. SSS   b. ASA   c. SAS

31) A triangle in which two sides are equal is called:

a. Scalene triangle   b. Equilateral triangle

c. Isosceles triangle   d. None of the above

32) The angles opposite to equal sides of a triangle are:

a. Equal   b. Unequal   c. supplementary angles   d. Complementary angles

33) If ABC is an equilateral triangle, then each angle equals to:

a. 90°   B.180°   c. 120°   d. 60°

34) Which of the following is not a criterion for congruence of triangles?

(a) SAS   (b) ASA   (c) SSA   (d) SSS

35) In △ PQR, ∠R = ∠P and QR = 4 cm and PR = 5 cm. Then the length of PQ is

(a) 2 cm   (b) 2.5 cm   (c) 4 cm   (d) 5 cm

36) If AB = QR, BC = PR and CA = PQ, then

(a) △ PQR ≅ △ BCA   (b) △ BAC ≅ △ RPQ

(c) △ CBA ≅ △ PRQ   (d) △ ABC ≅ △ PQR

37) If △ ABC ≅ △ PQR, then which of the following is not true?

(a) AC = PR

(b) BC = PQ

(c) QR = BC

(d) AB = PQ

38) In △ ABC, BC = AB and ∠B = 80°. Then ∠A is equal to

(a) 40°

(b) 50°

(c) 80°

(d) 100°

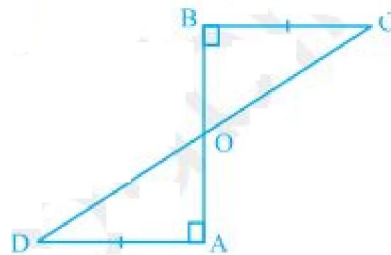**39) AD and BC are equal perpendiculars to a line segment AB (see Fig. 7.18). Show that CD bisects AB.**

Fig. 7.18

40). In right triangle ABC, right angled at C, M is the mid-point of hypotenuse AB. C is joined to M and produced to a point D such that DM = CM. Point D is joined to point B (see Fig. 7.23). Show that:

(i) ΔAMC ≅ ΔBMD

(ii) ∠DBC is a right angle.

(iii) ΔDBC ≅ ΔACB
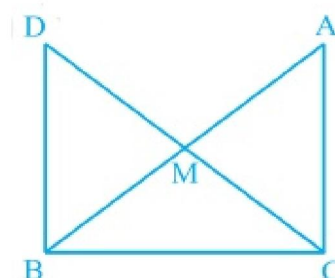
(iv) CM = ½ AB

Fig. 7.23

41). **Show that if the diagonals of a quadrilateral bisect each other at right angles, then it is a rhombus.**

42. **In parallelogram ABCD, two points P and Q are taken on diagonal BD such that DP = BQ (see Fig. 8.20). Show that:**

(i) ΔAPD ≅ ΔCQB

(ii) AP = CQ

(iii) ΔAQB ≅ ΔCPD
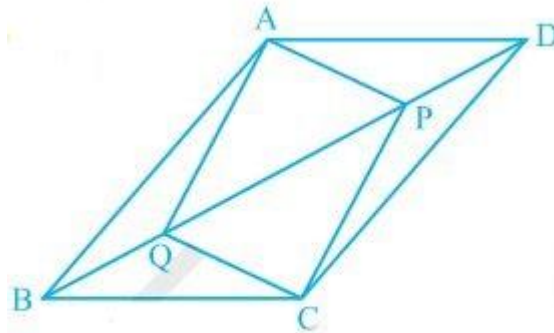
(iv) AQ = CP

(v) APCQ is a parallelogram

Fig. 8.20

43. **ABCD is a rectangle and P, Q, R and S are mid-points of the sides AB, BC, CD and DA, respectively. Show that the quadrilateral PQRS is a rhombus.**

44. **ABC is a triangle right angled at C. A line through the mid-point M of hypotenuse AB and parallel to BC intersects AC at D. Show that**
(i) D is the mid-point of AC
(ii) MD ⊥ AC
(iii) CM = MA = ½ AB

45. **Three girls, Reshma, Salma and Mandip, are playing a game by standing on a circle of radius 5m drawn in a park. Reshma throws a ball to Salma, Salma to Mandip, and Mandip to Reshma. If the distance between Reshma and Salma and between Salma and Mandip is 6m each, what is the distance between Reshma and Mandip?**

46. **Sides of a triangle are in the ratio of 12 : 17 : 25 and its perimeter is 540cm. Find its area.**

🙂 <u>ALL THE BEST- B N SINGH</u> 🙂