MM 30 **Areas related to Circles** **Time 1 h**

SECTION A 1 Mark each

Q1. The radii of 2 circles are 7cm and 14cm respectively. Find the radius of the circle which has area equal to sum of the areas of 2 given circles.

Q2. Find the area of sector of a circle of radius 7cm and of angle 60°

Q3. Find the area of quadrant of a circle whose radius is 7cm.

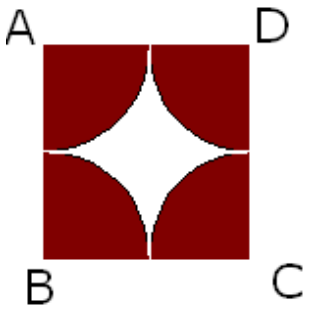
Q4. The great Indian mathematician Aryabhatta (A.D. 476 – 550) gave an approximate value of π = _____

Q5. The radii of two circles are 38 cm and 17 cm respectively. Find the radius of the circle which has circumference equal to the difference of the circumferences of the two circles.

SECTION B 2Marks each

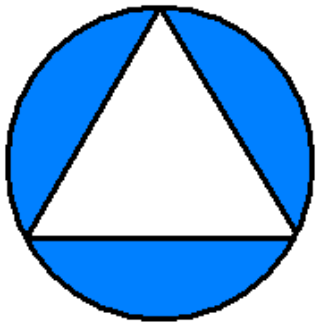
Q6. Find the area of the sector of a circle with radius 7 cm and of angle 30°. Also, find the area of the corresponding major sector

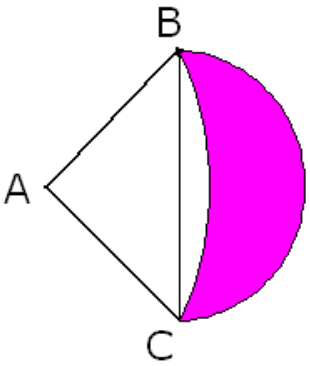
Q7. In Fig. ABCD is a square of side 21 cm. With centres A, B, C and D, four quadrants of circle are drawn such that each quadrant touches externally two of the remaining three quadrants. Find the area of the unshaded region.



SECTION C 3 Marks each

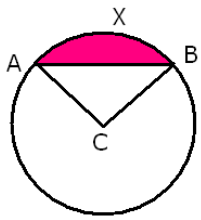
Q8. In a circular table cover of radius 48 cm, a design is formed leaving an equilateral triangle ABC in the middle as shown in fig. Find the area of the shaded region.





Q9. In Fig., ABC is a quadrant of a circle of radius 14 cm and a semicircle is drawn with BC as diameter. Find the area of the shaded region

Q10. Find the area of AXB if radius of circle is 10.5 cm angle ACB = 120°



SECTION D 6 Marks each

Q11. A semicircular is drawn with PR as diameter. Q is the midpoint of PR. Two Semicircles with PQ and QR as diameters are drawn. A circle with radius r is drawn touching the three semicircles. If PR = 28cm find area of bigger semicircle not covered by 2 smaller semicircles and the given circle

Q12. Two circular flower beds have been shown on two sides of a square lawn PQRS of side 112 m. If the centre of each circular flower bed is point of intersection O of the diagonals of the square lawn, find the sum of the areas of the lawn and flower beds.