

Test

1. Prove that opposite sides of a quadrilateral circumscribing a circle subtend supplementary angles at the centre of the circle.
2. Prove that the length of the tangents drawn from an external point to a circle are equal.
3. Two tangents PA and PB are from an external point P to a circle O, such that $\angle APB = x$ and $\angle AOB = y$. Prove that opposite angles are supplementary.
4. Prove that the tangents drawn at the ends of a diameter of a circle are parallel.
5. Prove that the parallelogram circumscribing a circle is a rhombus.



Come ,Let us celebrate Sports day.... Play with maths:

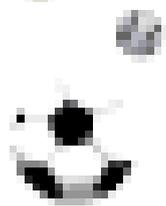
HAPPY SPORTS DAY - 2017



1. The circumference of a circle exceeds its diameter by 16.8cm. Find the circumference of the circle.



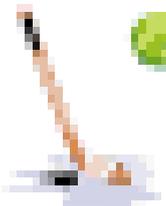
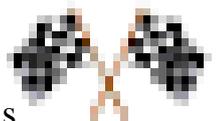
2. Find the area of the largest triangle that can be inscribed in a semi-circle of radius 21cm.



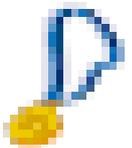
3. In the given figure, O is the center and AOC is a diameter of the circle. Find the sum of the areas of two shaded segments made by two equal chords AB and BC.



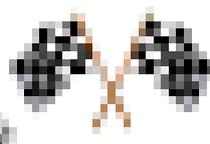
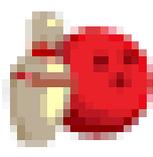
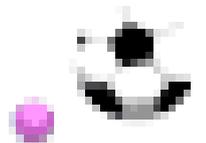
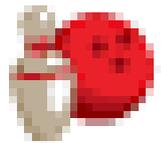
4. A square park has each side of 100m. At each corner, residents made a flower bed in the form of a quadrant of a circle of radius 14m. Find the area of the remaining portion of the park. What value is depicted by them?



5. A square path is inscribed in a quadrant shaped ground. If $OA=20\text{cm}$, find the area of shaded region. Also, if the total area of the park is given to build a factory, will it be advisable.



6. Two farmers have circular plots. The plots are watered with the same water source placed in the point P common to both the plots .The sum of their area is $130\pi\text{m}^2$ and the distance between their Centre's is 14m. Find the radii of the circles .What value is depicted by the farmers?



1. The diameter of front and rear wheels of a tractor is 80 cm and 2 m respect. Find the number of revolutions that rear wheel will make in covering a distance in which the front wheel makes 1400 revolutions.
2. Find the number of revolutions made by a circular wheel of area 1.52m^2 in rolling a distance of 176m.
3. Find the diameter of the circle whose area is equal to the sum of the areas of the two circles of diameter 20 m and 48 cm.
4. A circular pond is of 17.5m diameter. It is surrounded by a 2m wide path. Find the cost of construction the path at the rate of Rs25 per m^2 . Take $\pi=3.14$.
5. An archery target has 3 regions formed by 3 concentric circles. If diameters of the concentric circles are in the ratio 1:2:3. Then find the ratio of the areas of the 3regions.
6. The area of a circular playground is 22176m^2 . Find the cost of fencing this ground at rate of Rs50 per meter.
7. A circular park is surrounded by a road 21m wide. If the radius of the park is 105m, find the area of the road.
8. A piece of wire 20cm long is bent into the form of an arc of a circle subtending an angle of 60° at its center. Find the radius of the circle.
9. Area of a sector of a circle of radius 36cm is $54\pi\text{cm}^2$. Find the length of the corresponding arc of the sector.

You are on Stage, Perform well