



PERIMETER AND AREA OF PLANE FIGURES

Exercise: A

1. Find the area of the triangle whose base is 24cm and the corresponding height measure 14.5cm (174cm²)
2. Find the area of a triangular field whose sides are 50m, 45m and 35m (764.85sq.m)
3. In a triangle ABC, AB = 15cm, BC = 13cm and AC = 14cm, find the area of triangle ABC and hence its altitude on BC (84sq.cm, 11.4cm)
4. Find the area of an Isosceles triangle whose one of the equal sides measures 10cm, and the third side is 8cm. (36.66sq.cm)
5. The base of a triangular field is three times its altitude. If the cost of sowing the field at Rs 58 per hectare is Rs783, find its base & height ? (900m, 300m)
6. Find the area of a quadrilateral PQRS whose diagonal PR is 25cm long and length of the perpendiculars from the opposite Q and S on PR are QM = 3.6cm and SN = 2.4cm (75sq.cm)
7. The difference between the sides containing right angle in the right angled triangle is 7cm. The area of the triangle is 60sq.cm, find its perimeter? (40cm)
8. The perimeter of a triangle is 240m and two of its sides measure 50m and 112m. Find the area of the triangle and the length of the perpendicular on the side 112m from the opposite vertex (1680sq.m, 30m)
9. If the area of an equilateral triangle is $81\sqrt{3}$ sq.cm, Find the height? ($9\sqrt{3}$ cm)
10. Find the area of the quadrilateral PQRS in which PQ = 28cm, QR = 78cm, RS = 112cm, QS = 50cm and SP = 30cm (2047.13sq.cm)
11. The perimeter of an equilateral triangle measures $\sqrt{3}$ times

- metres as the area of the equilateral triangle measures in square metres. Find the length of its side (a = 4m)
12. The area of a right angle triangle is 600sq.cm. If the base of the triangle exceeds the altitude by 10cm. Find the dimensions of the triangle? (30cm, 40cm, 50cm)
13. find the height of an equilateral triangle whose perimeter is 66cm. Hence or otherwise calculate its area. ($11\sqrt{3}$ cm , $121\sqrt{3}$ sq. cm)

Exercise: B

- The length of a rectangular park is twice its breadth and its perimeter measures 0.84km. Find the area of the park in sq.m. (39200sq.m)
- Find the length of the diagonal of a rectangle whose adjacent sides are 12m and 5m long. (13m)
- A lawn is in the form of a rectangle whose sides are in the ratio 5 : 3. The area of the lawn is 3375sq.m. Find the cost of fencing the lawn at the rate of Rs7.50 per metre (Rs1800)
- Find the length of a diagonal of a square of side 6cm. ($6\sqrt{2}$ cm)
- Find the perimeter of the square if the sum of the length of whose diagonals is 144cm ($144\sqrt{2}$ cm)
- A room is 18m long and 10m wide. Find the cost of covering the floor with 75cm wide carpet at the rate of Rs16 per metre (Rs3840)
- Find the area and perimeter of a square shaped field, if the length of whose diagonal is 18m. (P = $36\sqrt{2}$, A = 162)
- In exchange of a square shape field, whose length of side is 84m, a man wants to buy a rectangular plot 147m long and of the same area as of the square plot. Find the width of the rectangular plot (48m)
- The cost of turfing a rectangular field at 85 paise per sq.m is Rs 625.75. Find the perimeter of the field if the sides are in the ratio 5 : 3 (112m)
- The harvesting cost of a square field at the rate of Rs 190 per hectare is Rs 2327.5 Find the cost of putting a fence around it at the rate of Rs7.50 per metre. (Rs10500)
- Two parallel sides of a trapezium are 11m and 25m long and

- the non-parallel sides are 15m and 13m long. Find the area of the trapezium. (216sq.m)
12. The area of a trapezium is 420sq.m. The perpendicular distance between the two parallel sides is 21m. If the difference of the parallel sides is 18m. Find the length of the parallel sides. (11m, 29m)

Exercise: C

- Find the circumference and area of a circle of diameter 14cm. (44cm, 154sq.cm)
- Find the circumference of a circle whose area is 75.46cm². (30.8cm)
- Find the area of a circle whose circumference is 66cm. (346.5sq.cm)
- If the perimeter of semicircular protractor is 88cm. Find the diameter of the protractor. (34.2cm)
- The difference between circumference and diameter of a circle is 75cm. Find the area of the circle. (962.5sq.cm)
- A wire when bent in the form of an equilateral triangle encloses an area of $484\sqrt{3}$ sq.cm. The same wire is bent in the form of a circle. Find the area enclosed by the circle. (1386sq.cm)
- A wire is looped in the form of a circle of radius 28cm. It is rebent in the form of a square. Determine the length of the diagonal of square. (62.216cm)
- The sum of the radii of two circles is 7cm and the difference of their circumferences is 8cm. Find the difference of their areas. (28sq.cm)
- A path 5m wide runs (around) outside a circular park whose radius is 18m. Find the area of the path. (644. 29sq.m)

EXTRA QUESTIONS

- The inner circumference of a circular track is 440m and the track is 14m wide. Calculate the cost of levelling the track at 25 paise /sq.m. Also find the cost of fencing the outer boundary of the track at Rs 5 / m. (Rs1694, Rs 2640)
 - A park is in the form of a ring whose inner circumference is 352m and outer circumference is 396m. Find the area and width of the park. (2618sq.m , 7m)
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