## MENSURATION
(AREA OF PLANE FIGURE)

RECTANGLE AND SQUARE

1. The perimeter of a football ground 120 m long is 400m, find the area in m^2.
2. If the area of a square is 36 sq cm, find the area of the square whose side is half the side of the given square.
3. The length of the diagonal of a square is 12cm. find
   i. Area of the square
   ii. Its perimeter.
4. If the perimeter of a rectangular plot is 74 m and the length of its diagonal is 28 m, find its area.
5. The length of a rectangular field is increased by 50% and the breadth is decreased by 50% to form a new rectangular field. What will be the change in area of the new field?
6. A lawn 30 m long and 16 m wide is surrounded by a path 2 m wide. Find the area of the path.
7. A room is 18 m long, 14 m wide and 8 m high. Find:
   i. The area of the four walls
   ii. The total surface area of the six faces of the room.
8. Find the cost of the walls of a room 5 m long, 4m wide, and 3 m high, allowing 7m2 for doors, windows, etc. if paper costs Rs.2.25 per piece, 4m by 50 cm, assuming that a whole number of pieces must be bought.

TRIANGLE

1. Find the area of the triangle whose height is 8 cm and base 12 cm.
2. Find the height of the triangle whose base is 11 cm and area $55cm^2$
3. Determine the area of a triangle whose sides are 5cm, 13 cm and 12cm.
4. Find the area of the equilateral triangle whose one side is 7cm.
5. Find the area of the isosceles triangle whose base is 3cm and perimeter 8cm.
6. If a square and a triangle have the same perimeter, which has the greater area? Illustrate with an example.
7. The base of an isosceles triangle measures 80cm and its area is 360 cm^2. Find the perimeter of triangle.
8. The triangular side wall of a flyover has been used for advertisement. The sides of the walls are 122m, 22m and 120m (see figure). The advertisement yields an earning of Rs.5000 per m^2 per year A company hired one of its walls for 3 month how much rent did it pay.
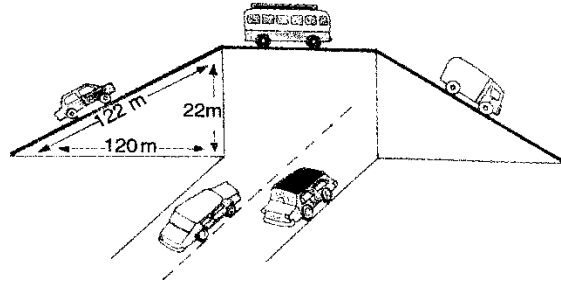
RHOMBUS

1. The base and height of a parallelogram are 10 cm and 3.5 cm respectively. Find its area.
2. The adjacent sides of a parallelogram are 35 cm and 25 cm in length, if the distance between the longer sides is 10 cm , find the distance between the shorter sides.
3. Find the area of a rhombus whose diagonals are 12 cm and 16 cm. also find its perimeter.

TRAPEZUM

1. The parallel side of a trapezium are 3 cm and 4 cm respectively and the height is 12cm, find the area of the trapezium.
2. The cross-section of a canal is trapezium in shape. If the canal is 10 m wide at the top. 6m wide at the bottom and the area of the cross-section is $72m^2$, determine its depth.
3. The parallel sides of a trapezium are 24cm and 52cm and the other sides are 26cm and 39 cm, find the height of trapezium.
4. In the given figure, PQRS is a trapezium in which the parallel sides PQ, SR are both perpendicular to QR. If PQ= 16cm, PS=17cm, RS= 8cm, calculate the area of the trapezium.