Areas

1. If 1cm represents 5m, what would be an area of 6 square cm. represent ?

2. Rajni says 1 sq.m = 1002 sq.cm. Do you agree? Explain.

3. ABCD is parallelogram and ABEF is a rectangle and DG is perpendicular on AB.
   Prove that (i) ar (ABCD) = ar(ABEF)
   (ii) ar (ABCD) = AB × DG

4. Triangle ABC and parallelogram ABEF are on the same base, AB as in between the same parallels AB and EF. Prove that ar(?ABC) =
   1 ar(|| gm ABEF)

5. Find the area of a figure formed by joining the mid-points of the adjacent sides of a rhombus with diagonals 12 cm. and 16 cm.

6. Prove that the area of a rhombus is equal to half of the product of the diagonals.

7.Show that the median of a triangle divides it into two triangles of equal areas

8. Show that the diagonals of a parallelogram divide it into four triangles of equal area.

9. A villager Ramayya has a plot of land in the shape of a quadrilateral. The grampanchayat of the village decided to take over some portion of his plot from one of the corners to construct a school. Ramayya agrees to the above proposal with the condition that he should be given equal amount of land in exchange of his land adjoining his plot so as to form a triangular plot. Explain how this proposal will be implemented. (Draw a rough sketch of plot).

10. In a triangle ABC (see figure), E is the midpoint of median AD, show that
    (i) ar ?ABE = ar ?ACE
    (ii) ar(ABC)