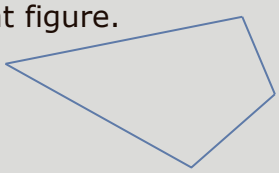
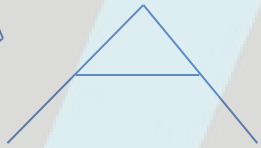
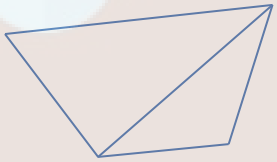
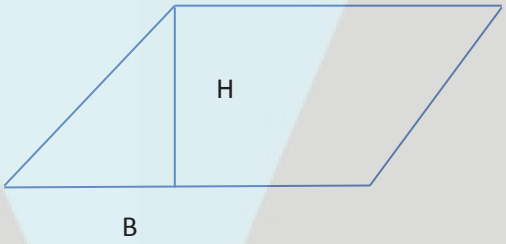
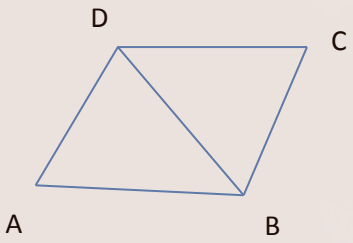
Class 9
Important Formulas

Chapter 9 - Area of Parallelogram and Triangles

S.no	Terms	Descriptions
1	Area of figure	Area of a figure is a number (in some unit) associated with the part of the plane enclosed by that figure.  
2	Properties of Area	(1) Two congruent figures have same area  2) If two figure have same area, they are not necessary congruent  3) If a planar region formed by a figure T is made up of two non-overlapping planar regions Formed by figures P and Q, then ar (T) = ar (P) + ar (Q), where ar (X) denotes the area of Figure X. 

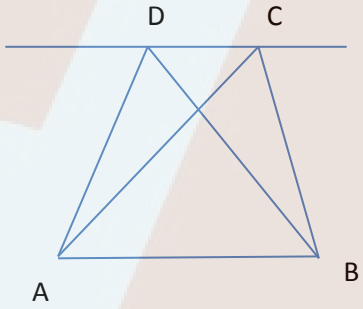
3	Figure on the same base and between same parallels	Two figures are said to be on the same base and between the same parallels, if they have a common base (side) and the vertices, (or the vertex) opposite to the common base of each figure lies on a line parallel to the base.  In the above figure triangle and parallelogram are on the same base and between same parallel
4	Parallelogram on same base and between same parallel	 Parallelograms on the same base (or equal bases) and between the same parallels are equal in area. **Area of Parallelogram ABCD= Area of Parallelogram PBCQ**
5	Area of Parallelogram	Area of parallelogram is equal base multiplied by Height  **Area of Parallelogram =Height X Base** Parallelograms on the same base (or equal bases) and having equal areas lie between the same parallel

6	Triangles and Parallelogram	a) If a parallelogram and a triangle are on the same base and between the same parallels, then area of the triangle is half the area of parallelogram



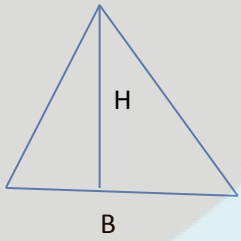
Area of triangle ADB= $\frac{1}{2}$ **X Area of parallelogram ABCD**

b) Triangles on the same base (or equal bases) and between the same parallels are equal in area



Area of triangle ABD=Area of triangle ACB

7	Area of Triangle	1) Area of triangle is given by $A = \frac{1}{2}BH$



2) Triangles on the same base (or equal bases) and having equal areas lie between the same parallels