# Class 9
# Important Formulas

eVidyarthi
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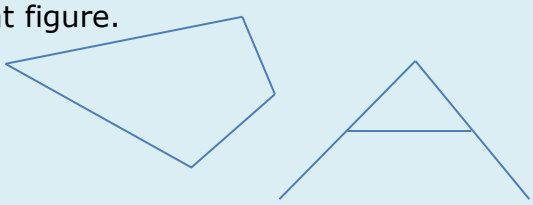
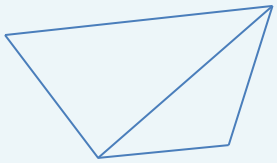
## Chapter 9 - Area of Parallelogram and Triangles

| 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.<br>  |
| **2** | Properties of Area | (1) Two congruent figures have same area<br>  <br>2) If two figure have same area, they are not necessary congruent<br>  |
| | | 3) If a planar region formed by a figure T is made up of two non-overlapping planar regions<br>Formed by figures P and Q, then ar (T) = ar (P) + ar (Q), where ar (X) denotes the area of<br>Figure X.<br>  |

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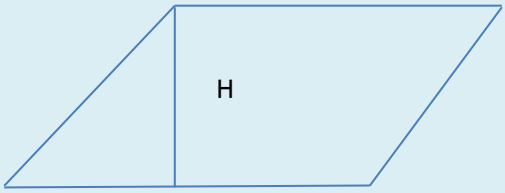
| **3** | Figure on the same base and between same parallels | Two figures are said to be on the same base and between the same parallels, if they have a common base (side) and the vertices, (or the vertex) opposite to the common base of each figure lies on a line parallel to the base.<br>  <br>In the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

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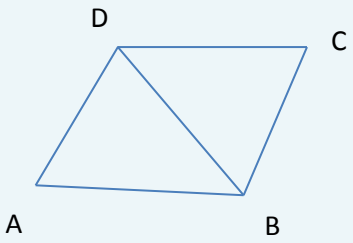
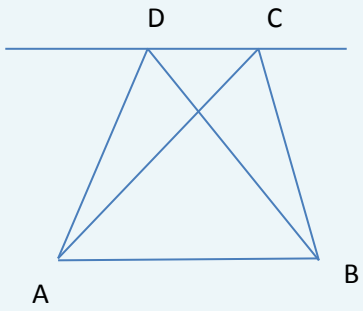
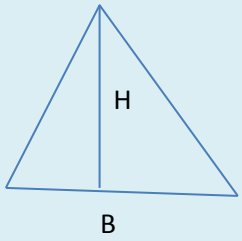
| **6** | Triangles and Parallelogram | a) If a parallelogram and a triangle are on the same base and between the same parallels, then area of the triangle is half the area of parallelogram<br>  <br><br>**Area of triangle ADB=** $\frac{1}{2}$ **X Area of parallelogram ABCD**<br>b) Triangles on the same base (or equal bases) and between the same parallels are equal in area<br>  <br><br>**Area of triangle ABD=Area of triangle ACB** |
| **7** | Area of Triangle | 1) Area of triangle is given by<br>$A = \frac{1}{2} BH$<br>  <br><br>2) Triangles on the same base (or equal bases) and having equal areas lie between the same parallels |