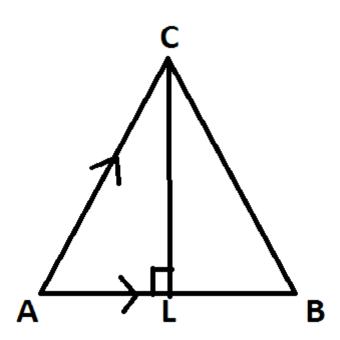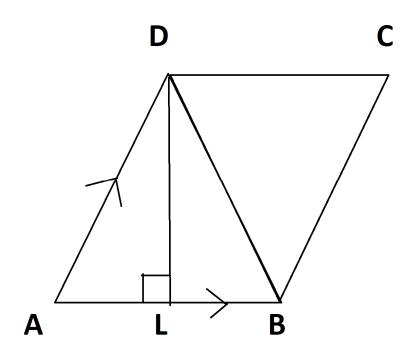Area of the $\triangle ABC$ is given by $\dfrac{1}{2}\left|\vec{a} \times \vec{b}\right|$ and it is called vector area of $\triangle ABC$.



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(13) **Area of Parallelogram**

Let us consider $\|gm\ ABCD$ in which $\overrightarrow{AB} = \vec{a}\ \&\ \overrightarrow{AC} = \vec{b}$

Area of the $\|gm\ ABCD$ is given by $\left|\vec{a} \times \vec{b}\right|$



(14) **Area of Quadrilateral**

Area of the quad. $ABCD$ is given by $\dfrac{1}{2}\left|\overrightarrow{AC} \times \overrightarrow{BD}\right|$