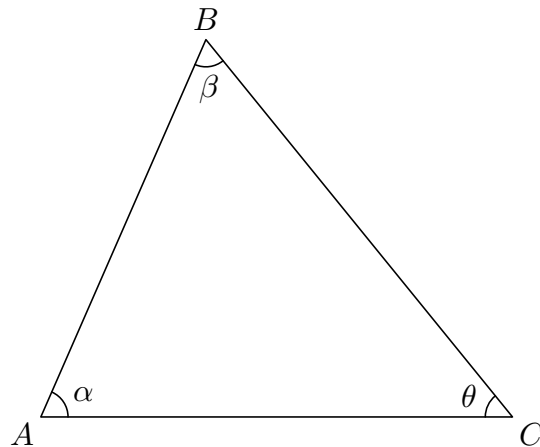


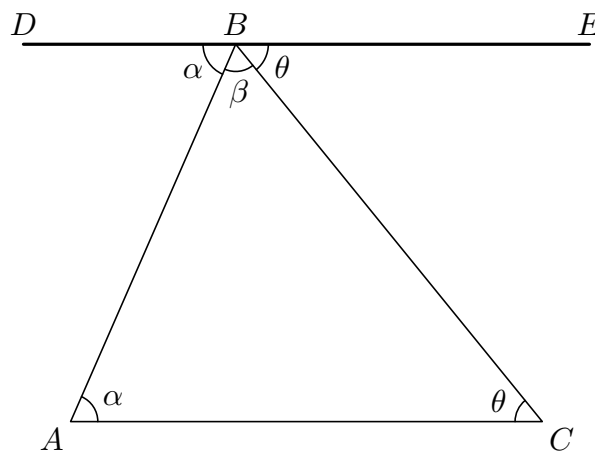
# Interior Angles in a Triangle

In any triangle, the sum of the three interior angles is  $180^\circ$ .



$$\alpha + \beta + \theta = 180^\circ$$

*Proof.* In the following picture, segment  $DE$  passes through point  $B$  and is parallel to  $AC$ .



Since alternate interior angles are equal, then  $\angle ABD = \alpha$  and  $\angle CBE = \theta$ . Therefore,

$$\alpha + \beta + \theta = 180^\circ.$$

□