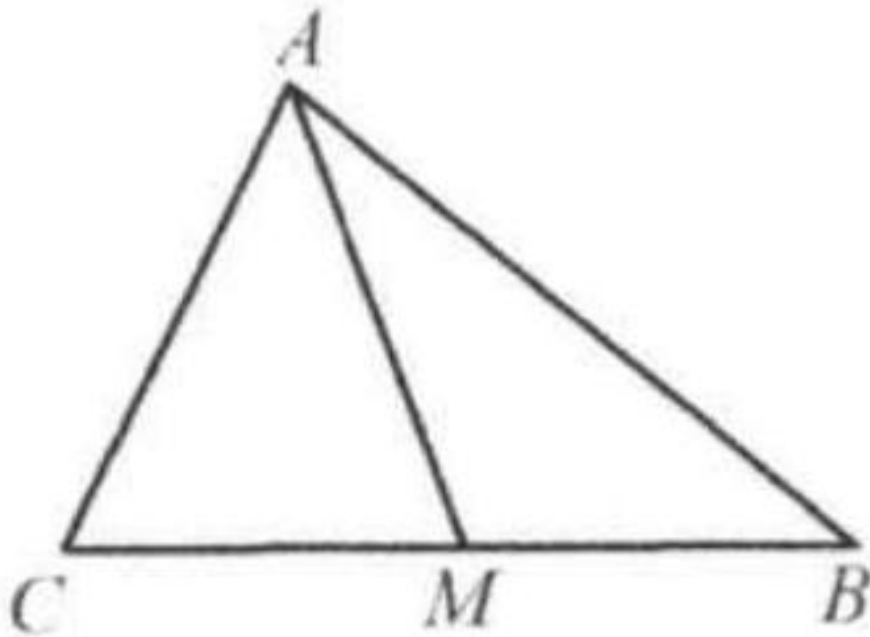


Problem

In $\triangle ABC$, $AB > AC$. AM is the median on side BC . Show that $\angle CAM > \angle BAM$.



Solution

Extend AM to E such that $AM = ME$.

Connect CE .

Since $AM = ME$, $CM = BM$, $\angle AMB = \angle EMC$, we have
 $\triangle AMB \cong \triangle EMC$.

So $CE = AB$, $\angle BAM = \angle CEA$.

In triangle ACE , $CE = AB > AC$ $\angle CAE > \angle CEA$.

Since $\angle BAM = \angle CEA$, $\angle CAM > \angle BAM$.