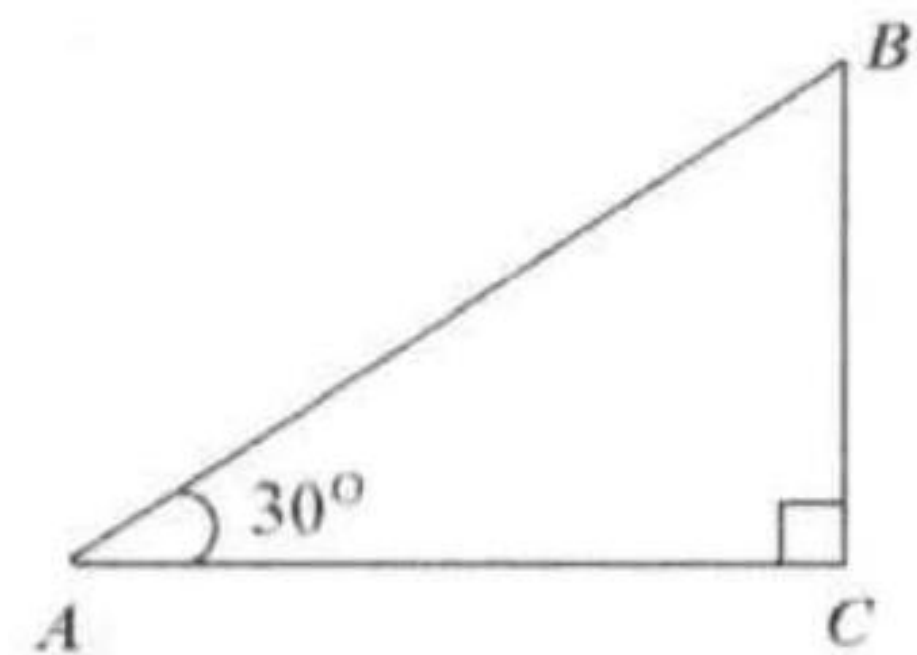


Example 1

Show that for right triangle, if $\angle A = 30^\circ$, then $BC = \frac{1}{2}AB$.

Proof: Draw the median MC . Since MC is the median, $MC = AM = MB$.



Triangle AMC is an isosceles triangle with $\angle MAC = \angle MCA = 30^\circ$.

Since $\angle BMC$ is the exterior angle of triangle AMC ,

$$\angle BMC = \angle MAC + \angle MCA = 30^\circ + 30^\circ = 60^\circ.$$

So, triangle MBC is an equilateral triangle with $BC = MC = MB$.

That is $BC = \frac{1}{2}AB$.

