

Problem 2) Drop a normal from B' to AB , as shown. The line $B'B''$ will then be parallel to BC , making the triangles ABC and $AB''B'$ similar. Since AB' is already known to be equal to $\frac{1}{2}AC$, we conclude that AB'' is equal to $\frac{1}{2}AB$. Therefore, $B'B''$ is the perpendicular bisector of AB , which means that the point B' is equidistant from A and B . Consequently, $BB' = AB' = \frac{1}{2}AC$.

