

1.113
6

$\angle ALH = 90^\circ = \angle CLB$ \checkmark
 $\angle LAH = \alpha$
 $\angle ABC = 90^\circ - \alpha$
 $\angle LCB = \alpha$
 \Downarrow
 $\triangle ALH \sim \triangle CLB$ (S.S.)

(S.S.) $\triangle ABD \sim \triangle BDC$ \checkmark
 \Downarrow
 $\frac{BD}{AD} = \frac{DC}{BD} \rightarrow BD = \sqrt{AD \cdot DC}$
 $\frac{LH}{BL} = \frac{AL}{CL} \rightarrow LH \cdot CL = AL \cdot BL$ \checkmark
 $LH^2 = AL \cdot BL$ \checkmark
 $KL^2 = AL \cdot BL = LH \cdot CL$