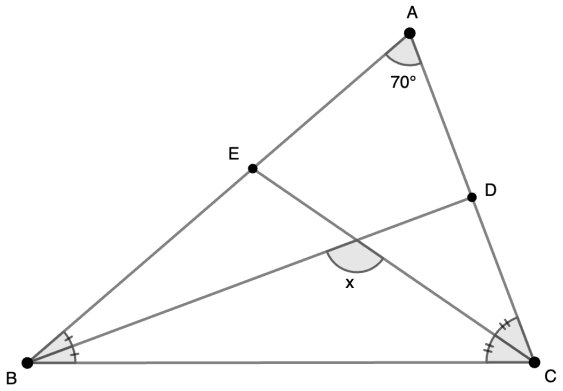
As shown in the figure below, segments BD and CE are bisectors of $\angle ABC$ and $\angle ACB$, respectively. Find the measure of $\angle x$.[1]



[1]Rakunan High School, Kyoto

Solution

Answer : 125°

Proof: $\angle x = \angle A + \angle ABD + \angle ACE = 70^\circ + \frac{1}{2}(\angle ABC + \angle ACB) = 70^\circ + \frac{1}{2}(180^\circ - 70^\circ) = \mathbf{125}^\circ$.