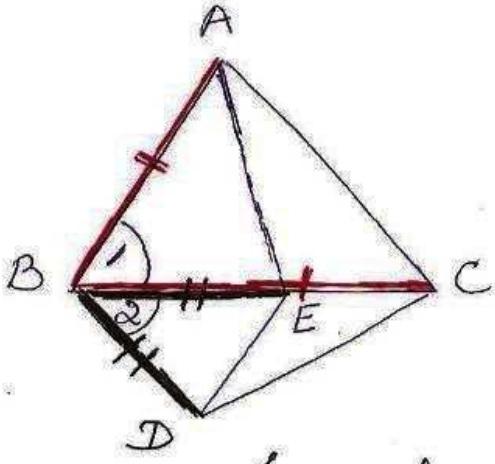

given – In figure $\triangle ABC$, and $\triangle BDE$ are equilateral $\triangle$s

to prove $AE = CD$

proof In $\triangle ABE$ and $\triangle CBD$

$AB = CB$ (Sides of equi. $\triangle ABC$)

$\angle 1 = \angle 2 = 60^\circ$ (each $\angle$ of equilateral $\triangle$)

$BE = BD$ (Sides of equi. $\triangle BDE$)

$\therefore \triangle ABE \cong \triangle CBD$ by SAS congruency

$AE = CD$ (cpct)