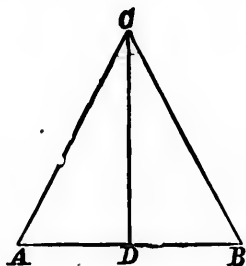


PROPOSITION X. PROBLEM.

To bisect a given finite straight line.



Let AB be the given st. line.

It is required to bisect AB .

On AB describe an equilat. $\triangle ACB$. I. 1.

Bisect $\angle ACB$ by the st. line CD meeting AB in D ; I. 9.
then AB shall be bisected in D .

For in $\triangle s$ ACD , BCD ,

$\therefore AC=BC$, and CD is common, and $\angle ACD=\angle BCD$,

$\therefore AD=BD$; I. 4.

$\therefore AB$ is bisected in D .

Q. E. F.

Ex. 1. The straight line, drawn to bisect the vertical angle of an isosceles triangle, also bisects the base.

Ex. 2. The straight line, drawn from the vertex of an isosceles triangle to bisect the base, also bisects the vertical angle.

Ex. 3. Produce a given finite straight line to a point, such that the part produced may be one-third of the line, which is made up of the whole and the part produced,