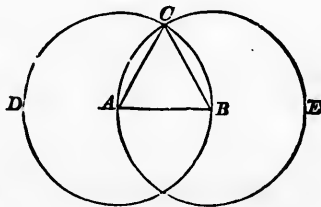


SECTION I.

On the Properties of Triangles.

PROPOSITION I. PROBLEM.

To describe an equilateral triangle on a given straight line.



Let AB be the given st. line.

It is required to describe an equilat. Δ on AB

With centre A and distance AB describe $\odot BCD$. Post. 3.

With centre B and distance BA describe $\odot ACE$. Post. 3.

From the pt. C , in which the $\odot$ s cut one another, draw the st. lines CA , CB . Post. 1.

Then will ABC be an equilat. Δ .

For $\because A$ is the centre of $\odot BCD$,
 $\therefore AC = AB$. Def. 13

And $\because B$ is the centre of $\odot ACE$,
 $\therefore BC = AB$. Def. 13.

Now $\because AC, BC$ are each $= AB$,
 $\therefore AC = BC$. Ax. 1.

Thus AC, AB, BC are all equal, and an equilat. ΔABC has been described on AB .

Q. E. F.