EQUIRATERAL TRIANGLE

You will learn how to draw equirateral triangle in old fashioned way. 😊

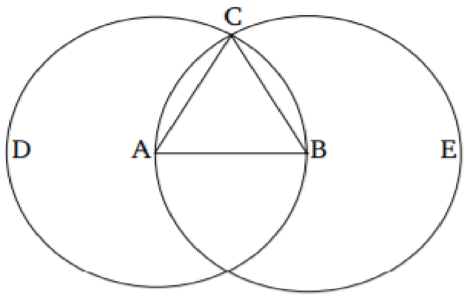
You will need:

- a compass
- a ruler
- a pencil
- a white paper.

You can find this drawings and more from Euqlid's Elements of Geometry Book1.

Proposition 1

To construct an equilateral triangle on a given finite straight-line.



Let AB be the given finite straight-line.

So it is required to construct an equilateral triangle on the straight-line AB.

Let the circle BCD with center A and radius AB have been drawn [Post. 3], and again let the circle ACE with center B and radius BA have been drawn [Post. 3]. And let the straight-lines CA and CB have been joined from the point C, where the circles cut one another,† to the points A and B (respectively) [Post. 1].

And since the point A is the center of the circle CDB, AC is equal to AB [Def. 1.15]. Again, since the point B is the center of the circle CAE, BC is equal to BA [Def. 1.15]. But CA was also shown (to be) equal to AB. Thus, CA and CB are each equal to AB. But things equal to the same thing are also equal to one another [C.N. 1]. Thus, CA is also equal to CB. Thus, the three (straight-lines) CA, AB, and BC are equal to one another.

Thus, the triangle ABC is equilateral, and has been constructed on the given finite straight-line AB. (Which is) the very thing it was required to do.

Let's do this !

∇ Draw an AB segment using the ruler.(5 cm length)

∇ Widen the legs of the compass length of AB segment and hold that measurement untill the drawing ends.

∇ Draw a circle.(Center is A point)

∇ Draw a second circle.(Center is B point)

∇ Intersect both circles above the AB line and name it C point.

∇ Draw a segment from C to A using the ruler.

∇ Draw a segment from C to B using the ruler.

∇ Measure CA and CB segments using the ruler.