## **Lesson 4: Proposition 1.2**

**Proposition 1.2 (Problem):** From a given point, draw a straight line equal to a given finite straight line.

Given: A finite straight line and a point.

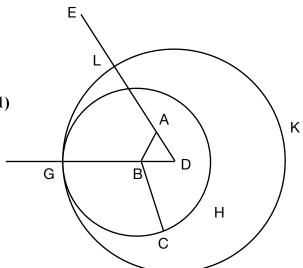
Construct: A straight line on the given point.

*Show:* The two straight lines are equal.

Let A be the given point and  $\overline{BC}$  the given straight line. From point A to point B, let the straight line  $\overline{AB}$  be joined. Construct an equilateral triangle DAB on line  $\overline{AB}$ . (**Prop 1.1**) Let the straight lines  $\overline{AE}$ ,  $\overline{BF}$  be produced in a straight line with  $\overline{DA}$ ,  $\overline{DB}$ . (**P2**)

With center B and distance BC, let the circle CGH be constructed. **(P3)** 

With center D and distance DG, let the circle GKL be constructed. **(P3)** 



Fact	Name