



Proposition II

To place a **straight line** equal to a given **straight line** with one end at a **given point**.

Let **A** be the given point, and **BC** the given **straight line**. It is required to place a **straight line** equal to the given **straight line** **BC** with one end at the point **A**.

Join the straight line **AB** from the point **A** to the point **B**, and construct the equilateral triangle **DAB** on it.

Produce the straight lines **AE** and **BF** in a straight line with **DA** and **DB**. Describe the circle **CGH** with center **B** and radius **BC**, and again, describe the circle **GKL** with center **D** and radius **DG**.

Since the point **B** is the center of the circle **CGH**, therefore **BC** equals **BG**. Again, since the point **D** is the center of the circle **GKL**, therefore **DL** equals **DG**. And in these **DA** equals **DB**, therefore the remainder **AL** equals the remainder **BG**. But **BC** was also proved equal to **BG**, therefore each of the straight lines **AL** and **BC** equals **BG**. And things which equal the same thing also equal one another, therefore **AL** also equals **BC**.

Therefore the **straight line** **AL** equal to the given **straight line** **BC** has been placed with one end at the **given point** **A**.