

Proposition 23: *Given an angle and a point on a given line, we can create an angle, equal to the given angle, with vertex at the given point, and one side along the given line.*

Proof: Let $\angle A$ be given, l the given line and B the given point. Let C be the vertex of $\angle A$, and pick points D, E on the two rays which are the sides of $\angle A$. Draw DE , by Postulate 1. By Proposition 22, construct a triangle BFG , with B as one vertex, with $BF=CD$, $BG=CE$, and $FG=DE$, and one side on l , say BF . Then, by Proposition 8, $\triangle BGF \cong \triangle CED$, so $\angle A = \angle DCE = \angle FBG$. Thus, we have constructed an angle with vertex B , along line l , which is equal to $\angle A$. QEF

