Draw circle B: center B, any radius.
Label the intersections of circle B with the sides of the angle as A and C.
Label the vertex of the original angle as B.
Draw $\overrightarrow{ED}$.
Draw $\overrightarrow{EG}$ as one side of the angle to be drawn.
Draw circle F: center F, radius FA.
Draw circle E: center E, radius EA.
Label intersection of circle E with $\overrightarrow{EG}$ as F.
Label either intersection of circle E and circle F as D.