**Activity 2.7.7 Construction of a Triangle Congruent to a Given Triangle**

**Construction**

Given: ∆*ABC* and line $\overleftrightarrow{DE}$

To construct: A triangle congruent to ∆*ABC* with one side lying on $\overleftrightarrow{DE}$.

Steps in the construction:

1. Construct a circle with radius = *AB* and center *D*.
2. Label *F* one of the points where this circle intersects $\overleftrightarrow{DE}.$
3. Construct a circle with radius = *AC* and center *D*.
4. Construct a circle with radius = *BC* and center *F*.
5. Label *G* one of the points where the last two circles intersect.
6. Construct segments $\overbar{DG}$ and $\overbar{FG}$.

Claim: ∆*DFG*$≅$∆*ABC*

**Proof**

Write your proof in the space below: