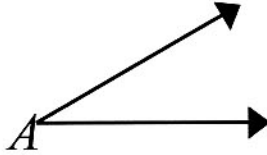


### Construction 1

Copy an angle onto another line segment.

To construct an angle congruent to  $\angle A$ :



Use a straightedge to draw a ray with endpoint  $D$ .

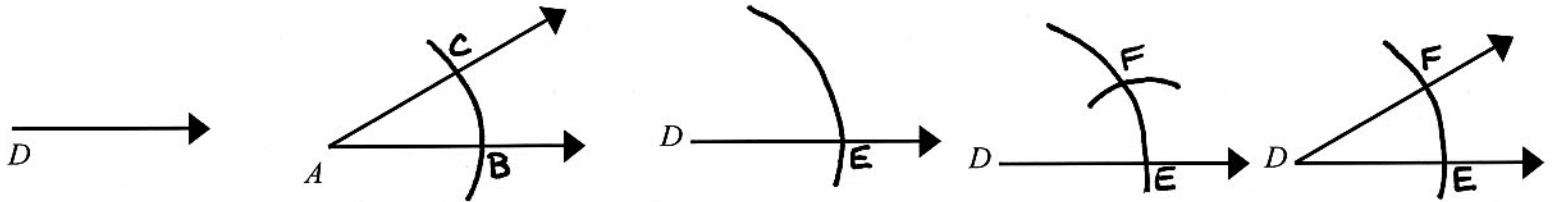
Place the compass point at  $A$  and draw an arc that intersects both sides of  $\angle A$ . Label the intersection points  $B$  and  $C$ .

Using the same compass setting, place the compass point at  $D$  and draw an arc that intersects the ray. Label the intersection  $E$ .

Place the compass point at  $B$  and open it to the distance  $BC$ . Place the point of the compass at  $E$  and draw an arc. Label its intersection with the first arc  $F$ .

Use a straightedge to draw  $DF$ .

$$\angle D \cong \angle A$$



You know that the instructions have created two congruent angles because of SSS congruence.  $AB \cong DE$ ,  $AC \cong DF$ , and  $BC \cong EF$ , so  $\angle D \cong \angle A$ .