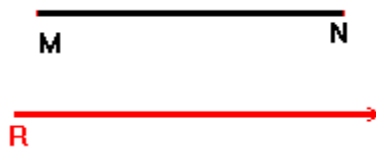


# Congruent Line Segments and Angles

Here are two constructions you can do with your compass and a straight edge.

Construct a line segment congruent to  $\overline{MN}$ .

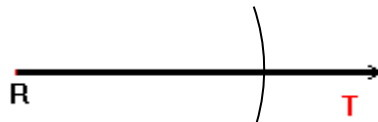
**Step 1:** Draw a ray longer than  $\overline{MN}$ . Label the endpoint R.  $\overline{MN} \cong \overline{RT}$



**Step 2:** Measure  $\overline{MN}$  using your compass. Put the point on M, and open the compass so the pencil is on N.



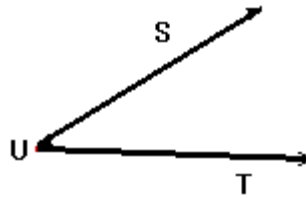
**Step 3:** Use the same opening from Step 2. Put the compass point on R. Draw an arc intersecting the ray. Label the intersection point T.



$$\overline{MN} \cong \overline{RT}$$

Construct an angle congruent to  $\angle SUT$ .

**Step 1:** With the compass point on U, draw an arc through  $\angle SUT$



**Step 2:** Draw AK.

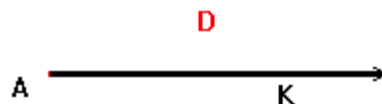
Use the same opening as in Step 1.

With the compass point on A,

draw an arc just like the one you drew in Step 1.



**Step 3:** Use the compass to measure the arc in  $\angle SUT$



**Step 4:** Using the same opening, locate point D.

**Step 5:** Draw  $\overline{AD}$ .  $\angle SUT \cong \angle DAK$

