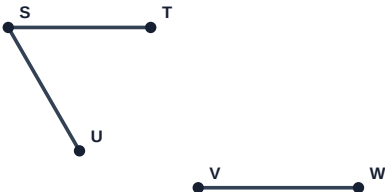


Construct Angles

Use only a compass and straightedge. Copy compass widths; do not measure with a protractor.

Compass and straightedge workspace

1. Copy angle TSU at vertex V, using ray VW as the first side.



WORKSPACE

2. At A, construct a 60-degree angle using ray AB.



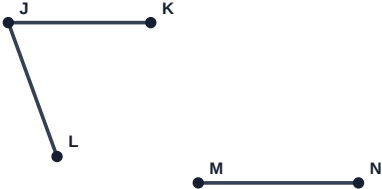
WORKSPACE

3. At S, construct a 90-degree angle to ray ST.



WORKSPACE

4. Copy angle KJL at vertex M, using ray MN as the first side.



WORKSPACE

Construct Angles

Construction Answer Key

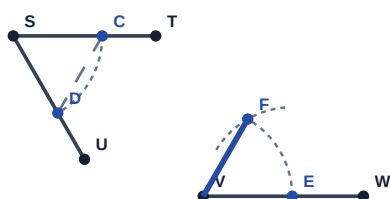
Use only a compass and straightedge. Copy compass widths; do not measure with a protractor.

Solutions and compass marks

1.

Copy angle TSU at vertex V, using ray VW as the first side.

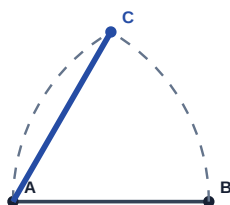
1. Draw one arc centered at S; mark its ray crossings C and D.
2. With the same radius, draw an arc centered at V; mark its crossing with VW as E.
3. Set the compass to chord CD; from E mark F on the new arc.
4. Draw ray VF. The copied chord gives an equal angle.



2.

At A, construct a 60-degree angle using ray AB.

1. Set the compass to AB.
2. Draw an arc centered at A through B.
3. Without changing the compass, draw an arc centered at B; label the upper intersection C.
4. Draw ray AC. The equilateral triangle gives a 60-degree angle.



Construct Angles

Construction Answer Key

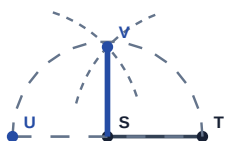
Use only a compass and straightedge. Copy compass widths; do not measure with a protractor.

Solutions and compass marks

3.

At S, construct a 90-degree angle to ray ST.

1. Extend ray ST through S; use one compass width to mark U opposite T, so $ST = SU$.
2. From T and U, draw equal arcs that meet at V.
3. Draw ray SV. It is perpendicular to line TU.



4.

Copy angle KJL at vertex M, using ray MN as the first side.

1. Draw one arc centered at J; mark its ray crossings C and D.
2. With the same radius, draw an arc centered at M; mark its crossing with MN as E.
3. Set the compass to chord CD; from E mark F on the new arc.
4. Draw ray MF. The copied chord gives an equal angle.

