

Geometry

Duplicating and Bisecting Angles and Segments

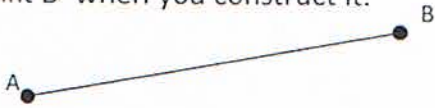
Geometry _____

Period _____

Date _____

For each construction, use only a compass and straightedge. Do not erase your construction arcs!

1. Duplicate the segment in its new location. Label the point B' when you construct it.



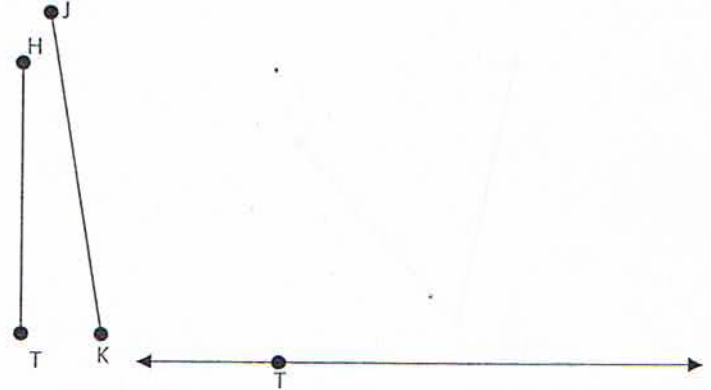
2. Copy the segment. Label D'.



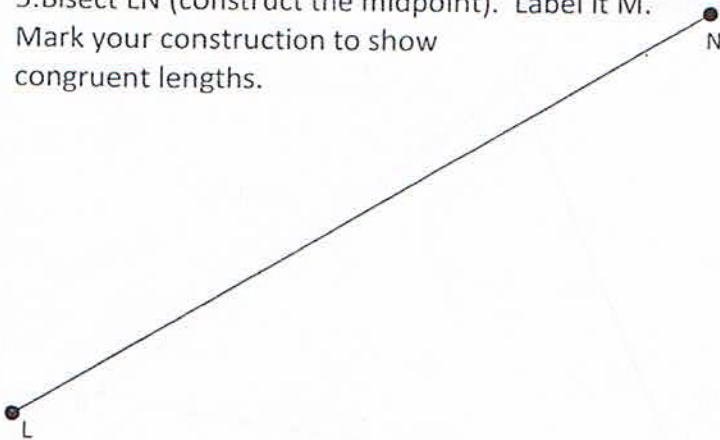
3. Construct an equilateral triangle with side length EF. Label the triangle EQU.



4. Construct an isosceles triangle with base length TH and congruent sides the length of JK. Name the Δ THS. Name the vertex angle _____. Mark the congruent lengths in your construction.



5. Bisect LN (construct the midpoint). Label it M. Mark your construction to show congruent lengths.



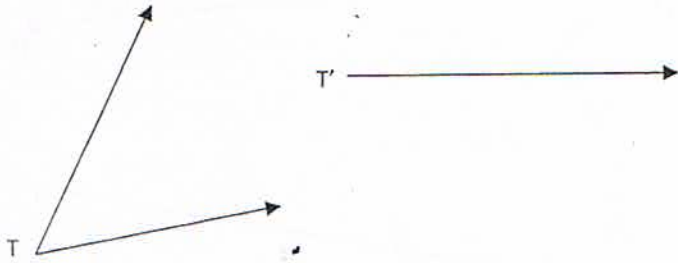
6. Use the bisector method to divide the segment into 4 congruent lengths. Mark the congruences.



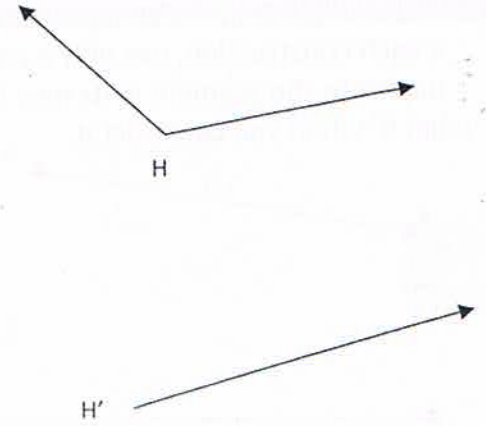
7. Bisect the segment below. You will have to modify the construction method so that your arcs do not go off the paper. Label the midpoint S and mark the congruences.



8. Copy the angle where indicated.

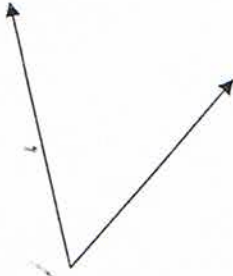


9. Copy the angle.

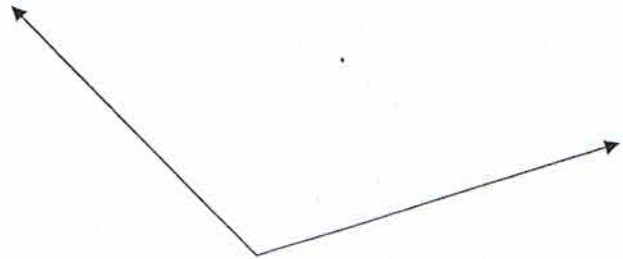


Construct an angle bisector for each angle below. Do not erase construction arcs! Mark your diagram to show congruent angles

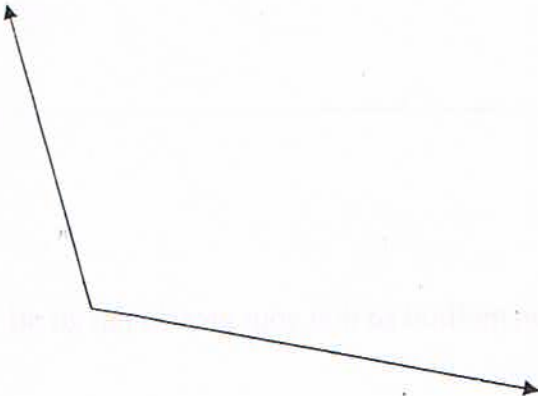
10.



11.



12. Use the angle bisector construction to divide the angle into 4 equal angles.



13. Bisect $\angle ARI$ with ray RZ . Label the ray.

