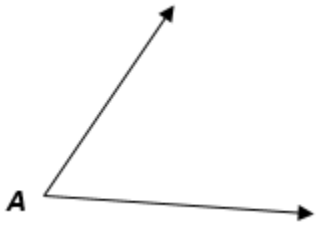
Name_____ Geometry 1-6 Angle Constructions

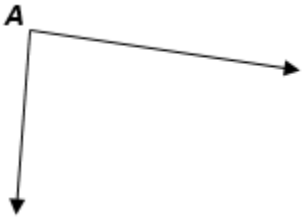
I. Construct a Congruent Angle

Steps:



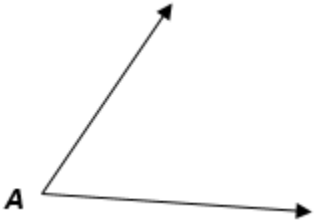
1. Draw a ray with endpoint S
2. Put the compass point on A and draw an arc that that intersects both sides of the angle. Label the the points of intersection P and Q.
3. With the same compass setting, put the compass point on S and draw the same arc intersecting the ray and label the point of intersection R.
4. Open the compass to the length of PQ and secure the setting. Put the compass point on R and draw an arc to intersect the first arc. Label the point of intersection T.
5. Connect points S and T.

Practice 1: Construct an angle congruent to $\angle A$.



II. Construct an Angle Bisector

Steps:



1. Put the compass point on A and draw an arc that Intersects both sides of the angle. Label the points of intersection B and C.
2. Open the compass to the length of BC and secure the setting. With the compass point on B draw an arc between the sides of the angle.
3. With the same setting, put the compass point on C and draw an arc between the sides of the angle that Intersects the previous arc. Label the point of intersection D.
4. Connect points A and D.

Practice 2: Construct the angle bisector of $\angle D$.