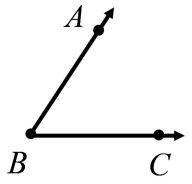
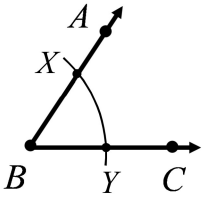
Type 5: Angle Bisector

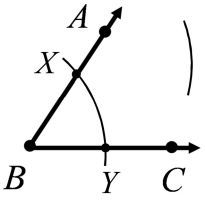
Goal: Construct the bisector of $\angle ABC$.



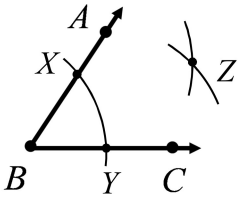
Step 1: Place the compass on the vertex of the angle. Draw an arc that intersects both sides of the angle. Label the intersection points X and Y.



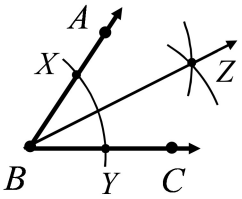
Step 2: Place the compass on point X and draw an arc on the interior of the angle.



Step 3: Without changing the radius, place the compass on point Y and draw another arc, intersecting the arc drawn in the last step. Label the intersection point Z.

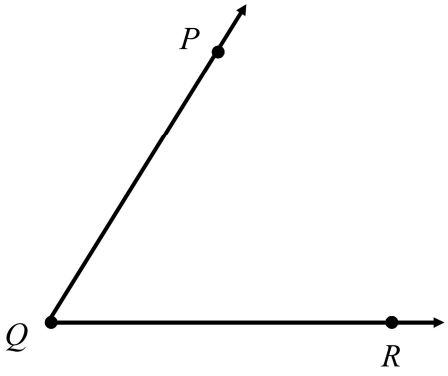


Step 4: Using a straightedge, draw $\overrightarrow{BZ}$.

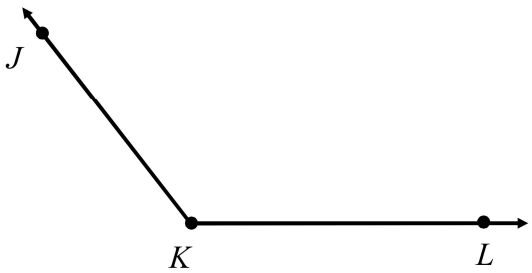


Now you Try! Construct the bisector of each given angle.

1)



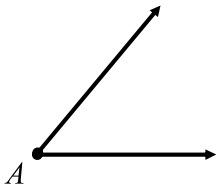
2)



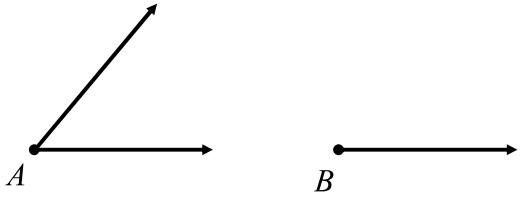
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Type 6: Congruent Angles

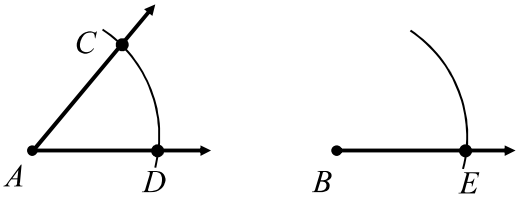
Goal: Construct an angle congruent to $\angle A$.



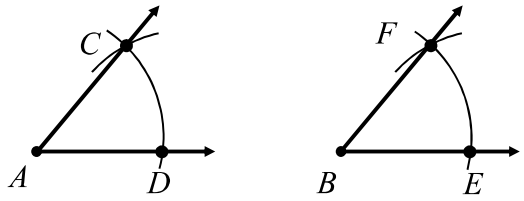
Step 1: Begin by drawing a ray with endpoint B.



Step 2: Place the compass on point A and draw an arc intersecting both sides of the angle. Without changing the radius, place the compass on point B and draw a long arc. Label the intersection points as C, D, and E.

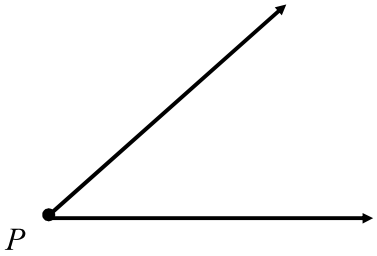


Step 3: Set the radius of the compass to the length of CD. Place the compass on point E and draw an arc intersecting the previous arc. Label the intersection point F. Draw $\overrightarrow{BF}$.

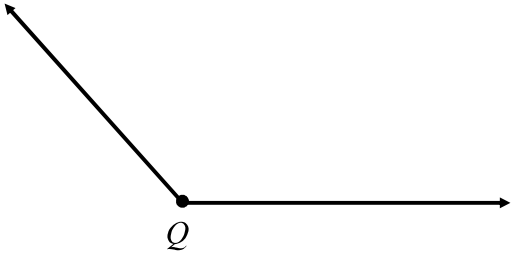


Now you Try! Given each angle, construct a congruent angle.

1)



2)



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