Look at section 14.4 in your book to check out the directions to constructions OR vis it the websites provided in announcements

14.4. Honors Geometry

DATE: 9/30

Target 1A. Use tools and methods to perform basic geometric constructions

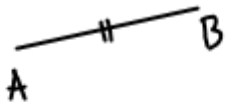
A Construction is a _____ made with help of only two simple tools. The procedures used for constructions are based on the one developed by Greek geometricians. The two tools needed are:

1) compass, to construct circles or arcs of a circle and
2) straightedge, to draw lines or rays (a straightedge differs from a ruler only the absence of marks for measuring distances.)

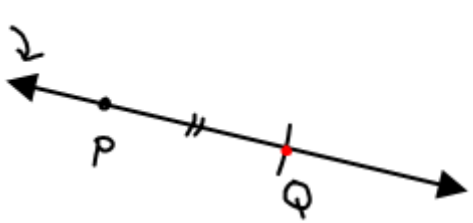
Construction 1: Copy a segment

Given: $\overline{AB}$

Construct: A segment $\overline{PQ}$ that is $\cong$ to $\overline{AB}$



working line



$\therefore \overline{AO} \cong \overline{PQ}$

Construction 2: Copy an angle

Given: $\angle ABC$

Construct: An $\angle PQR$ that is $\cong$ to $\angle ABC$

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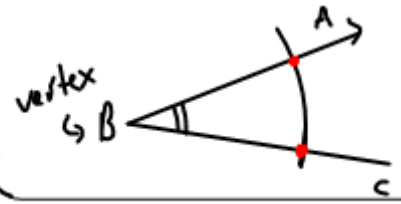
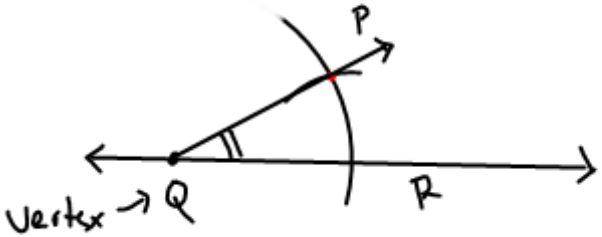
Given: $\angle ABC$

Construct: An $\angle PQR$ that is $\cong$ to $\angle ABC$





$\therefore \angle ABC \cong \angle PQR$

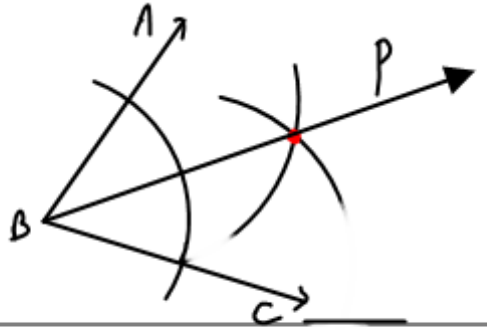
Construction 3: Bisect an angle

Given: $\angle ABC$

Construct: $\overrightarrow{BP}$, the bisector of $\angle ABC$

$\therefore \overrightarrow{BP}$ bisects $\angle ABC \Rightarrow$

$\angle ABP \cong \angle CBP$



Construction 4: Construct a line segment whose length is equal to the sum of two segments

Given: $\overline{AB}$ and $\overline{CD}$ with AB>CD "AB longer than CD"

Construct: A segment whose length is the sum of $\overline{AB}$ and $\overline{CD}$

$\therefore AB + CD = XR$