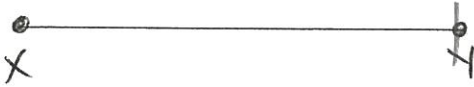


Name Key Date _____ Period _____

HW #1-8

Finish this worksheet. Use a compass and a straightedge to complete the following constructions. DO NOT ERASE ANY PENCIL MARKS! Remember, you can watch the YouTube videos that are posted on Edline to help you with this part of the homework assignment.

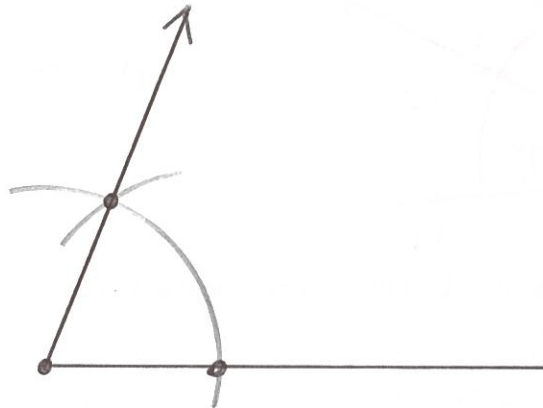
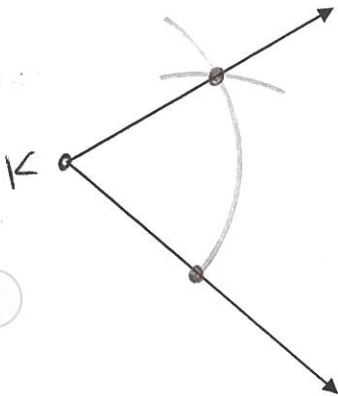
1. Construct a segment congruent to $\overline{XY}$



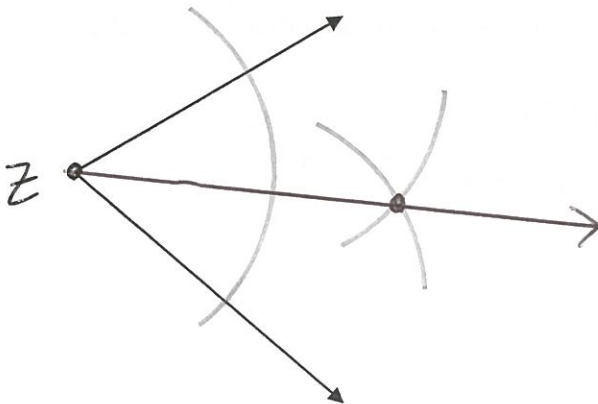
$$\overline{AB} \cong \overline{XY}$$



2. Construct an angle congruent to $\angle K$

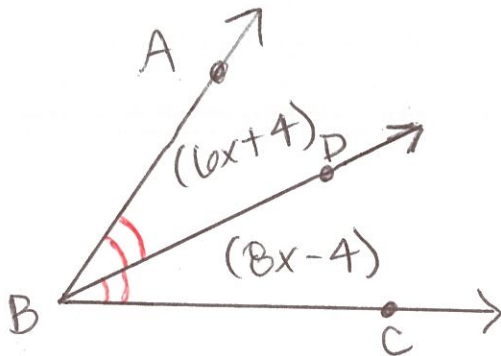


3. Construct the angle bisector of $\angle Z$



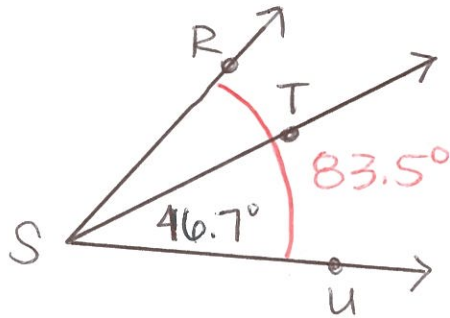
For the following, show all required work.

4. $\overrightarrow{BD}$ bisects $\angle ABC$. If $m\angle ABD = (6x + 4)^\circ$ and $m\angle DBC = (8x - 4)^\circ$, find the measure of each of the angles. Draw a diagram.



$$\begin{aligned} m\angle DBC &= 28^\circ \\ m\angle ABD &= 28^\circ \\ m\angle ABC &= 56^\circ \end{aligned}$$

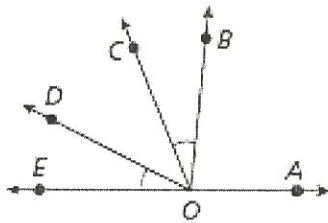
5. T is in the interior of $\angle RSU$. If $m\angle TSU = 46.7^\circ$ and $m\angle RSU = 83.5^\circ$, find $m\angle RST$. Draw a diagram.



$$m\angle RST = 36.8^\circ$$

6. Find the value of x . Use the diagram below and the following pieces of information.

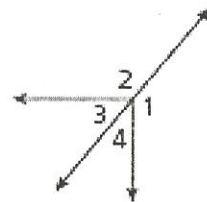
$$\begin{aligned} m\angle AOB &= 6x + 5 \\ m\angle BOC &= 4x - 2 \\ m\angle AOC &= 8x + 21 \end{aligned}$$



$$x = 9$$

7. Tell whether the angles are only adjacent, adjacent and form a linear pair, or not adjacent. Use the diagram given.

- a) $\angle 1$ and $\angle 4$ adjacent and linear pair
b) $\angle 2$ and $\angle 3$ adjacent and linear pair
c) $\angle 3$ and $\angle 4$ adjacent
d) $\angle 3$ and $\angle 1$ not adjacent



8. Given $m\angle A = 56.4^\circ$, find the following. Draw a diagram for each.

- a) The supplement of $\angle A$ b) The complement of $\angle A$

$$123.6^\circ$$

$$33.6^\circ$$