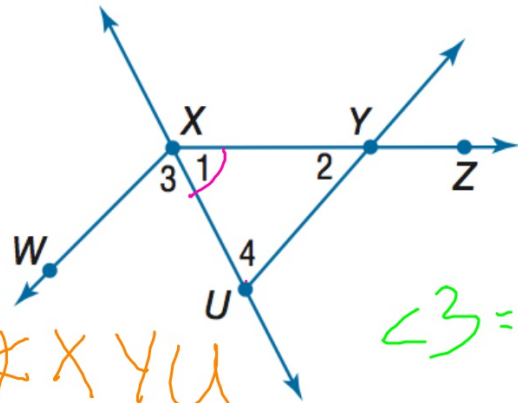


Geometry BELL WORK

* you do NOT have to copy the drawing *

Use the figure at the right.

1. Name the vertex of $\angle 4$. U
2. Name the sides of $\angle 3$. \overrightarrow{XW} \overrightarrow{XU}
3. What is another name for $\angle 2$? ~~$\angle XYU$~~
4. What is another name for $\angle UXY$?



$\angle 3 = \angle UXI$

$\angle YXU$ $\angle 1$

1-4 Angle Measure

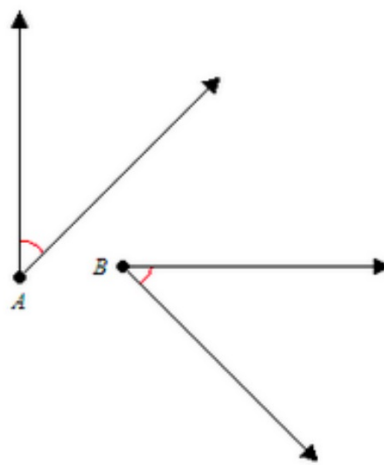
We have:
Measured and classified angles.

Today we will:
Identify and use congruent angles and angle bisectors.

G-CO: Experiment with transformations in the plane.

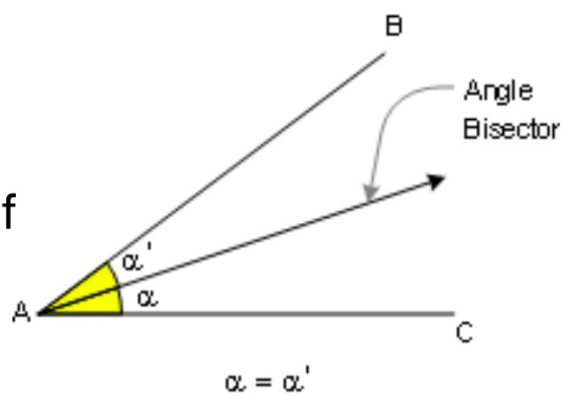
congruent angles

have the same measure



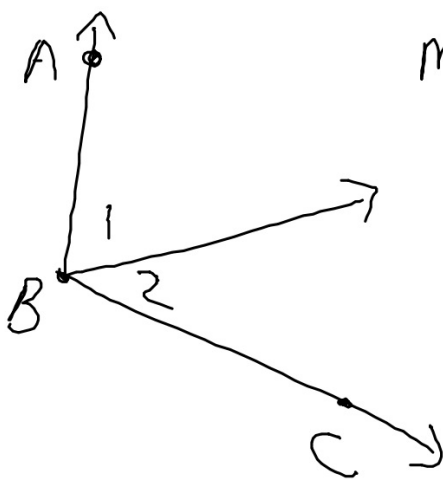
angle bisector

cuts the angle in half



angle addition

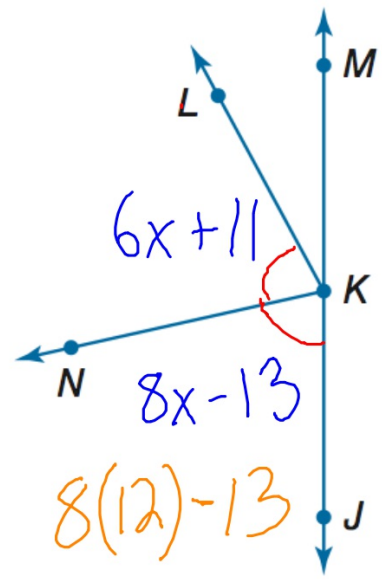
when angles share a side, the sum of the measures of the smaller angles is equal to the measure of the largest angle.



$$m\angle ABC = m\angle 1 + m\angle 2$$

ALGEBRA In the figure, \overrightarrow{KJ} and \overrightarrow{KM} are opposite rays, and \overrightarrow{KN} bisects $\angle JKL$. If $m\angle JKN = 8x - 13$ and $m\angle NKL = 6x + 11$, find $m\angle JKN$.

$$\begin{array}{r}
 \cancel{6x} + 11 = 8x - 13 \\
 \underline{-6x \qquad -6x} \\
 11 = 2x - 13 \\
 \underline{+13 \qquad +13} \\
 24 = 2x \\
 12 = x
 \end{array}$$



$$\begin{array}{l}
 8(12) - 13 \\
 96 - 13 = \\
 \boxed{83^\circ = m\angle JKN}
 \end{array}$$

If $m\angle MPN = 2x + 14$ and
 $m\angle NPR = x + 34$, find x and find $m\angle NPR$.

