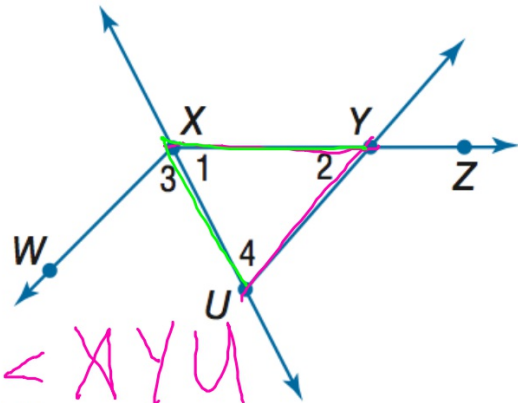


Geometry BELL WORK

** 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 $\angle UXY$? $\angle YXU$ $\angle 1$



1-4 Angle Measure

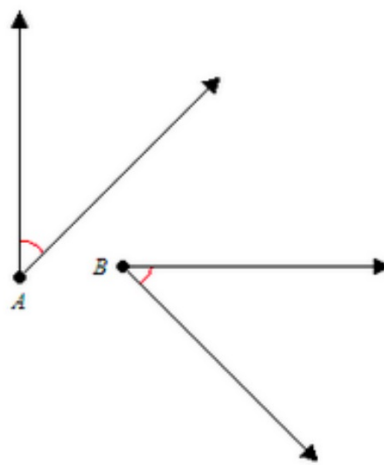
We have:
Measured and classified angles.

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

G-CO: Experiment with transformations in the plane.

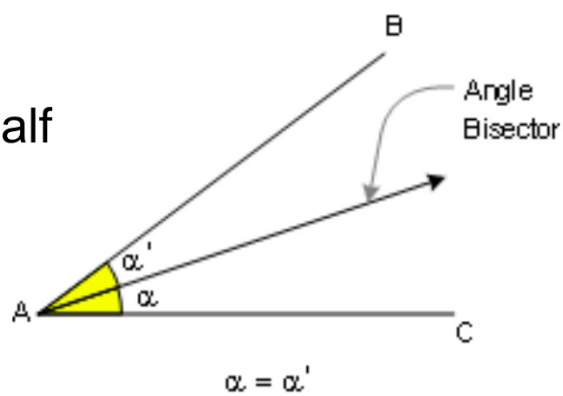
congruent angles

have the same measure



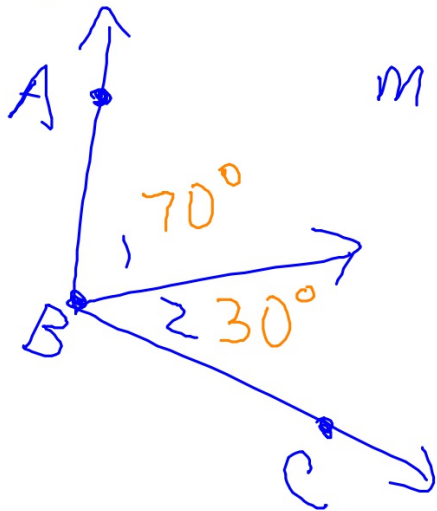
angle bisector

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.

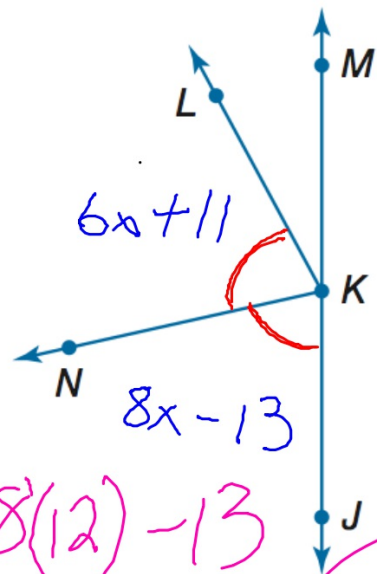


$$m\angle ABC = m\angle 1 + m\angle 2$$

$$m\angle ABC = 70 + 30 \\ = 100^\circ$$

ALGEBRA In the figure, \overrightarrow{KJ} and \overrightarrow{KM} are opposite rays, line 180° and \overrightarrow{KN} bisects $\angle JKL$. If $m\angle JKN = 8x - 13$ and $m\angle NKL = 6x + 11$, find $m\angle JKN$.

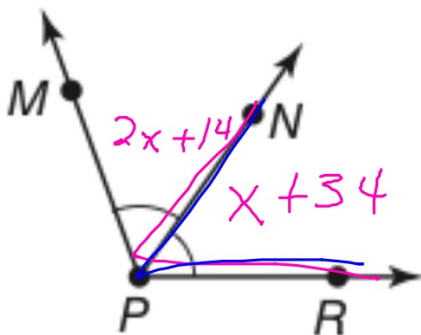
$$\begin{array}{r}
 6x + 11 = 8x - 13 \\
 -6x \quad \quad -6x \\
 \hline
 11 = 2x - 13 \\
 +13 \quad \quad +13 \\
 \hline
 24 = 2x \\
 \underline{\quad} \quad \underline{\quad} \\
 12 = x \\
 \hline
 \end{array}$$



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

If $m\angle MPN = 2x + 14$ and

$m\angle NPR = x + 34$, find x and find $m\angle NPR$.



$$2x + 14 = x + 34$$

$$\begin{array}{r} -x \\ \hline \end{array}$$

$$x + 14 = 34$$

$$\begin{array}{r} -14 \\ \hline \end{array}$$

$$x = 20$$

$$20 + 34$$

$$m\angle NPR = 54^\circ$$

