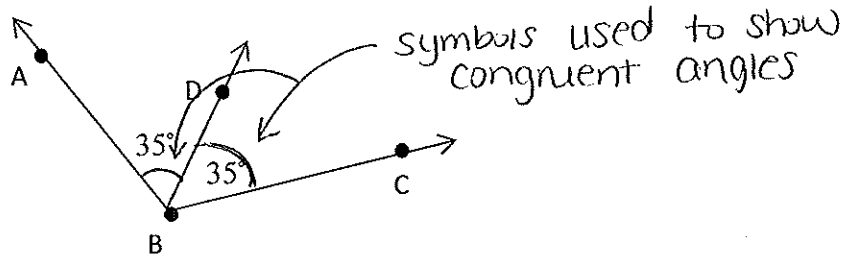


Section 2.2 Angle Bisectors

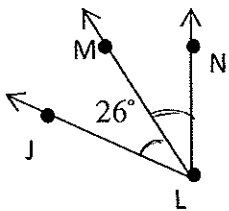
An angle bisector is a ray that divides an angle into two angles that are congruent.



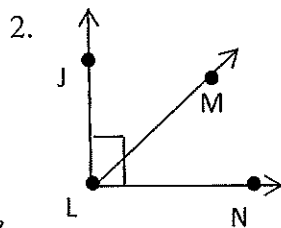
\vec{BD} bisects $\angle ABC$ because $\angle ABD \cong \angle DBC$.

Examples:

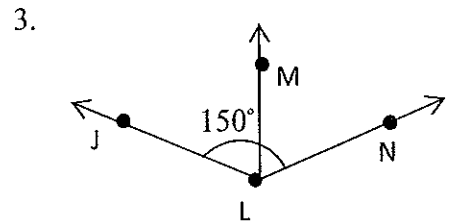
\vec{LM} bisects $\angle JLN$. Find $m\angle JLM$, $m\angle MLN$, and $m\angle JLN$.



$m\angle JLM = 26^\circ$
 $m\angle MLN = 26^\circ$
 $m\angle JLN = 52^\circ$



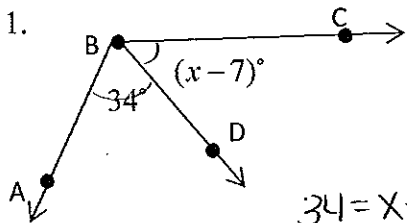
$m\angle JLM = 45^\circ$
 $m\angle MLN = 45^\circ$
 $m\angle JLN = 90^\circ$



$m\angle JLM = 75^\circ$
 $m\angle MLN = 75^\circ$
 $m\angle JLN = 150^\circ$

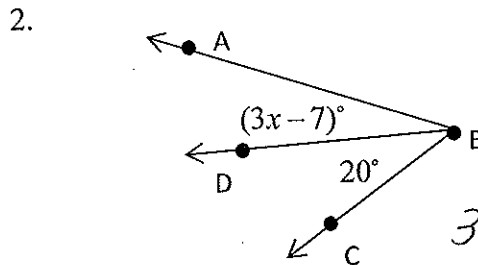
Examples with Algebra:

\vec{BD} bisects $\angle ABC$. Find the value of x.



$34 = x - 7$
 $+7 \quad +7$
 $41 = x$

41



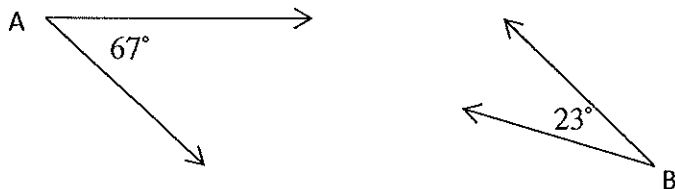
$3x - 7 = 20$
 $+7 \quad +7$
 $3x = 27$
 $\frac{3x}{3} = \frac{27}{3}$
 $x = 9$

x = 9

Section 2.3: Complimentary & Supplementary Angles

Two angles are complimentary angle if their sum is 90° .

Each angle is called the Complement of the other.



$$m\angle A + m\angle B = 90^\circ$$

$\angle A$ is the complement of $\angle B$ and $\angle B$ is the complement of $\angle A$.

Two angles are supplementary if their sum is 180° .

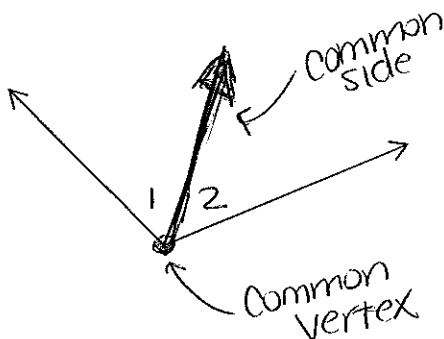
Each angle is called the Supplement of the other.



$$m\angle A + m\angle B = 180^\circ$$

$\angle A$ is the supplement of $\angle B$ and $\angle B$ is the supplement of $\angle A$.

Two angles are adjacent if they share a common vertex & side, but have no common interior points.

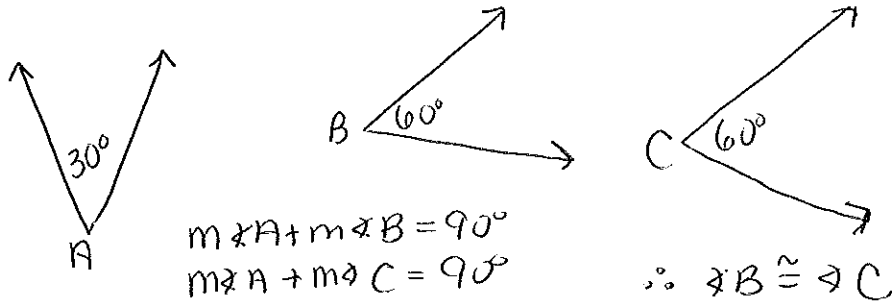


A theorem is a true statement that follows from other true statements.

- It is something that has been proven to be true.

Congruent Complements Theorem

If two angles are complements to the same angle, then they are congruent.



Congruent Supplements Theorem

If two angles are supplements to the same angle, then they are congruent.

