
EXAMPLE 4 Find LM if L is between N and M, $NL = 6x - 5$,
 $LM = 2x + 3$ and $NM = 3x + 13$.

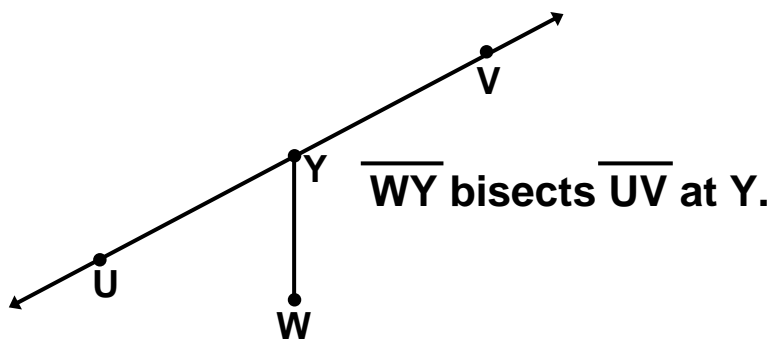
LM = _____

| TERM | DEFINITION | SKETCH |
|-----------------|--|---------------|
| Midpoint | A point on a segment equidistant from both endpoints. | |

EXAMPLE 1 B is the midpoint of AC. $AB = z + 2$ and $BC = 2z - 6$.
Find "z".

| TERM | DEFINITION | SKETCH |
|------------------|---|--------|
| Segment Bisector | A point, line, ray, segment, or plane that intersects a segment at its midpoint | |

Use the figure below to answer EXAMPLES 3 - 5.



EXAMPLE 2 If $UY = 5$, then find YV and UV .

EXAMPLE 3 If $UY = 4x - 3$ and $YV = x$, find UY and UV .

EXAMPLE 4 If $UV = 18$ and $UY = 9$, find YV .

EXAMPLE 5 \overline{AB} bisects \overline{EF} at T. If $EF = x + 6$ and $TF = x - 1$, find TE.

EXAMPLE 6 B is between A and C. $AB = 2y + 6$, $BC = y + 8$, and $AC = 20$. Find the value of “y” and determine if B is a bisector.