

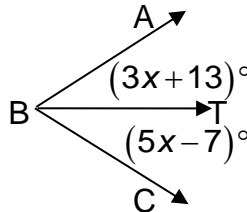
**Definitions:**

Segment Addition Postulate:

Angle Addition Postulate:

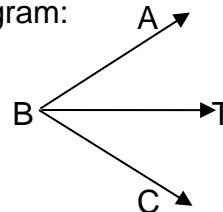
$\overline{BT}$  bisects  $\angle ABC$ . Find the value of  $x$ .

- $m\angle ABT = (3x + 13)^\circ$   
 $m\angle CBT = (5x - 7)^\circ$



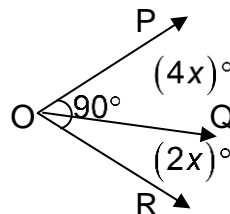
- $m\angle ABT = (12x - 7)^\circ$   
 $m\angle CBT = (5x + 28)^\circ$

Label the diagram:



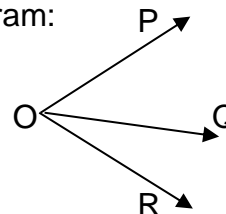
Use the angle addition postulate to find the value of  $x$ .

- $m\angle POQ = (4x)^\circ$   
 $m\angle QOR = (2x)^\circ$   
 $m\angle POR = 90^\circ$



- $m\angle POQ = (3x + 7)^\circ$   
 $m\angle QOR = (5x - 2)^\circ$   
 $m\angle POR = 61^\circ$

Label the diagram:



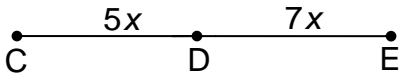
M is the midpoint of  $\overline{AB}$ . Solve for  $x$ .

- $AM = 6x + 2$   
 $MB = 8x - 4$

- Label the diagram:  
 $AM = 6x$   
 $MB = 3x + 15$

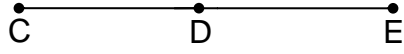
Use the segment addition postulate to solve for x.

7.  $CD = 5x$   
 $DE = 7x$   
 $CE = 96$



8.  $CD = 6x - 5$   
 $DE = 4x - 5$   
 $CE = 129$

Label the diagram:



Find the midpoint of the segment with the given endpoints. Midpoint =  $\left(\frac{x+x}{2}, \frac{y+y}{2}\right)$

9.  $A(-3, 5)$  &  $B(5, -1)$

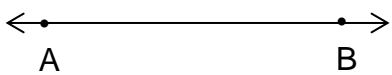
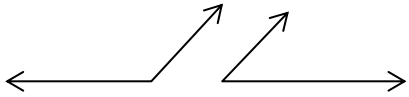

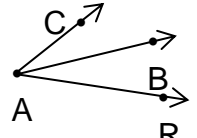
10.  $C(-4, -3)$  &  $D(6, 3)$

Find the length of the segment with the given endpoints. Distance =  $\sqrt{(x-x)^2 + (y-y)^2}$

11.  $A(3, 2)$  &  $B(2, 0)$

12.  $C(1, 3)$  &  $D(-2, 4)$

Review: Match the name of the geometric figure in the middle with the correct drawing on the left and the correct notation on the right. Use different colors to show the matches.

	Congruent Segments	$= 180^\circ$
	Line	$\overrightarrow{AB}$ bisects $\angle CAR$
	Supplementary Angles	$\overleftrightarrow{AB}$
	Angle Bisector	$\overline{PG} \cong \overline{AB}$