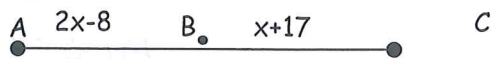


Refer to the figure and the given information to find each measure.

1. Given: $AC = 39$ m



$$AB + BC = AC$$

$$x = \underline{10} \quad 2x - 8 + x + 17 = 39$$

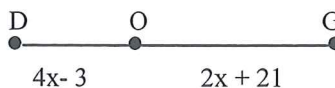
$$AB = \underline{12} \quad 3x + 9 = 39$$

$$BC = \underline{27} \quad \begin{array}{r} -9 \\ -9 \end{array}$$

$$3x = 30$$

$$x = 10$$

2. Given the figure and $DG = 60$ ft.



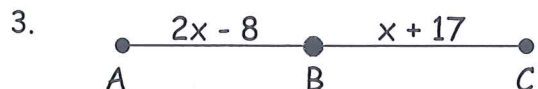
$$x = \underline{7} \quad 4x - 3 + 2x + 21 = 60$$

$$DO = \underline{25} \quad 6x + 18 = 60$$

$$OG = \underline{35} \quad 6x = 42$$

$$x = 7$$

For 3-5, $\overline{AB} \cong \overline{BC}$.

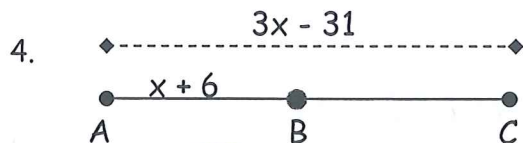


$$2x - 8 = x + 17$$

$$x = 25$$

$$x = \underline{25} \quad AB = \underline{42}$$

$$BC = \underline{42} \quad AC = \underline{84}$$



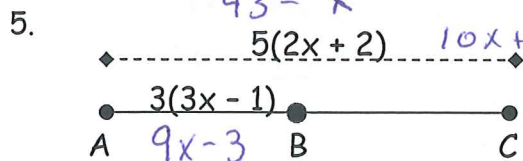
$$2(x+6) = 3x-31$$

$$2x+12 = 3x-31$$

$$43 = x$$

$$x = \underline{43} \quad AB = \underline{49}$$

$$BC = \underline{49} \quad AC = \underline{98}$$



$$18x - 6 = 10x + 10 \quad x = \underline{2} \quad AB = \underline{15}$$

$$8x = 16 \quad x = 2 \quad BC = \underline{15} \quad AC = \underline{30}$$

6. If M is the midpoint of segment \overline{JX} , find the following:



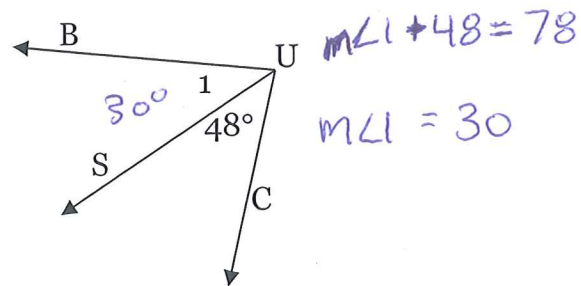
$$2x - 4 = x + 8$$

$$x = 12$$

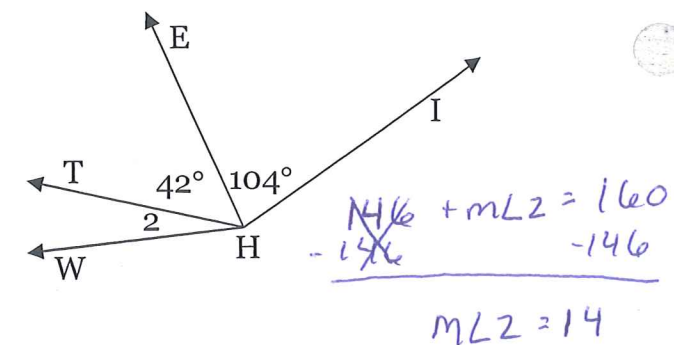
$$x = \underline{12} \quad JM = \underline{20}$$

$$MX = \underline{20} \quad JX = \underline{40}$$

7. Find $m\angle 1$ if $m\angle CUB = 78$.



8. Find $m\angle 2$ if $m\angle WHI = 160$.

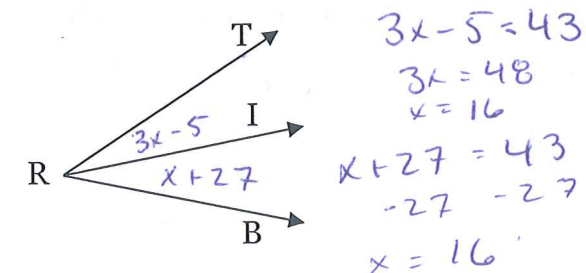


9. $m\angle TRI = 3x - 5$, $m\angle IRB = x + 27$,
and $m\angle TRB = 86$.
Does \overline{RI} bisect $\angle TRB$?

$$3x - 5 = x + 27$$

$$2x = 32$$

$$x = 16$$



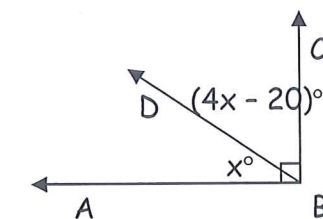
10) Find $m\angle DBC$.

$$4x - 20 + x = 90$$

$$5x - 20 = 90$$

$$5x = 110$$

$$x = 22$$



$$4(22) - 20$$

$$88 - 20$$

$$\angle DBC = 68$$

11) $\angle 1$ and $\angle 2$ are complementary. $m\angle 1 = 2x + 7$ and $m\angle 2 = 4x - 19$. Find the measure of each angle.

$$2x + 7 + 4x - 19 = 90$$

$$6x - 12 = 90$$

$$6x = 102$$

$$x = 17$$

$$\angle 1 = 41$$

$$\angle 2 = 49$$

12) $\angle 3$ and $\angle 4$ are supplementary. $m\angle 3 = 5x + 22$ and $m\angle 4 = 7x + 2$. Find the measure of each angle.

$$\angle 3 = 87$$

$$\angle 4 = 93$$

$$5x + 22 + 7x + 2 = 180$$

$$12x + 24 = 180$$

$$12x = 156$$

$$x = 13$$