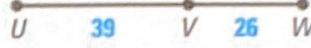
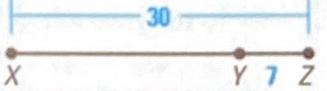
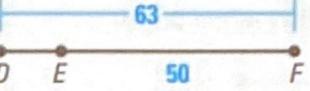
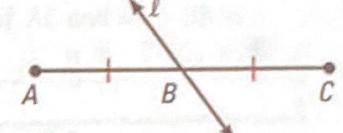


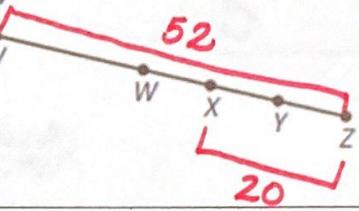
Homework - Segments Relationships Day 1 Name Key Hr _____

Rapid Practice #1-12: Find each indicated length. (no geo or just needed)

1. Find MP .  $MP = 23$	2. Find RT .  $RT = 44$	3. Find UW .  $UW = 65$
4. Find XY .  $XY = 23$	5. Find DE .  $DE = 13$	6. Find BC if $AC = 19$ cm.  $BC = 9.5\text{cm}$

FINDING LENGTHS In the diagram, points V, W, X, Y , and Z are collinear, $VZ = 52$, $XZ = 20$, and $WX = XY = YZ$. Find the indicated length.

7. WX 10 8. VW 22 9. WY 20
 10. VX 32 11. WZ 30 12. VY 42



For #13 -20, Find x and lengths indicated. Write a geometry equation and justification for each question.

13. Find x .



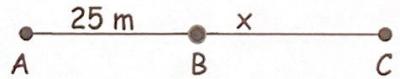
$$\bar{PQ} \cong \bar{RS} \text{ congruence}$$

$$2x - 3 = 15$$

$$2x = 18$$

$$x = 9$$

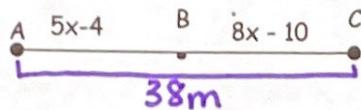
14. B is the midpoint of AC.



$$\bar{AB} \cong \bar{BC} \quad \text{def. of midpt}$$

$$25\text{m} = x$$

15. B is between point A and C and $AC = 38$ m



$$\overline{AB} + \overline{BC} = \overline{AC} \text{ Segment addition}$$

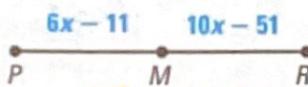
$$5x - 4 + 8x - 10 = 38$$

$$\boxed{x = 4}$$

$$\begin{aligned} AB &= 5(4) - 4 \\ BC &= 8(4) - 10 \end{aligned}$$

$$x = \boxed{4} \quad AB = \boxed{16\text{m}} \quad BC = \boxed{22\text{m}}$$

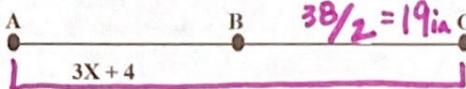
17. M is the midpoint of PR.



$$\begin{aligned} \overline{PM} &\cong \overline{MR} \text{ def of midpt} \\ 6x - 11 &= 10x - 51 \\ \boxed{x = 10} \end{aligned}$$

$$x = \boxed{10} \quad PM = \boxed{49}$$

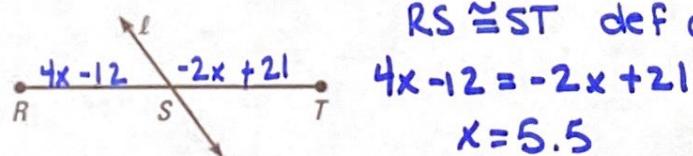
18. B is the midpoint of AC and $AC = 38$ in



$$\begin{aligned} \overline{AB} &\cong \overline{BC} \text{ def of midpt} \\ 3x + 4 &= 19 \\ \boxed{x = 5} \end{aligned}$$

$$x = \boxed{5}$$

19. Line l bisects RT through point S and $RS = 4x - 12$ and $ST = -2x + 21$.



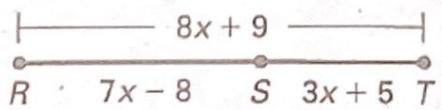
$$\overline{RS} \cong \overline{ST} \text{ def of } \overline{l} \text{ bisector}$$

$$4x - 12 = -2x + 21$$

$$x = 5.5$$

$$x = \boxed{5.5} \quad ST = \boxed{10} \quad RT = \boxed{20}$$

20. S is between R and T.



$$\overline{RS} + \overline{ST} = \overline{RT} \text{ segment addition}$$

$$7x - 8 + 3x + 5 = 8x + 9$$

$$\boxed{x = 6}$$

$$x = \boxed{6} \quad RS = \boxed{34} \quad ST = \boxed{23} \quad RT = \boxed{57}$$