Geometry
WS 1.1 + (Congruence & Segment Addition)

Name_____
Date:_____Period:____

Write the Segment Addition Postulate for the points described. Draw a picture to help.

1. S is between D and P

2. J is between S and H

3. C is between Q and R

4. T is between M and N

C is between A and E. For each problem, draw a picture representing the three points and the information given. Solve for indicated.

5. If AC = 24 in. and CE = 13 in., AE = _____.

6. If CE = 7in. and AE = 23 in., AC = _____.

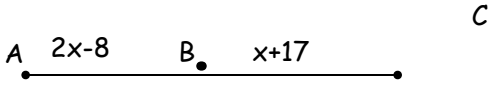
Find QR in the following problems. R is between Q and S.

7. If RS = 44.6 and SQ = 68.4, find QR.

8. If RS = 33.5 and RQ = 80, find SQ.

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

9. Given : AC = 39 m

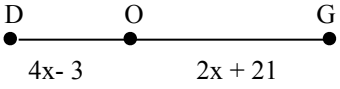


x = _____

AB = _____

BC = _____

10. Given the figure and DG = 60 ft.



x = _____

DO = _____

OG = _____

If U is between T and B, find the value of x and the lengths of the segments. (Hint: Draw a picture for each problem with the given information and then write the equation to solve.)

11. TU = 2x, UB = 3x + 1, TB = 21

x = _____

TU = _____

UB = _____

12. TU = 4x-1, UB = 2x -1, TB = 5x

x = _____

TU = _____

UB = _____

TB = _____

Write an equation **for the each:**

13. Segment AB is congruent to segment BC _____

14. $\overline{XY} \cong \overline{AB}$ _____

15. Point B bisects segment AC_____

16. 2x+5 is equal to 4x-8_____

17. Point A is the midpoint of segment PT_____

For 18-19, suppose $\overline{RS}$ is congruent to $\overline{MN}$. For each set of lengths, solve for x, and find the length of each segment. For 20-21, $\overline{AB} \cong \overline{BC}$.

18. RS = 3x + 17, MN = 7x – 15

x = _____

RS = _____

MN = _____

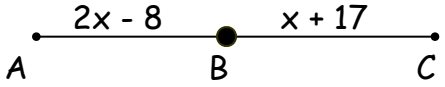
19. RS = x + 10, MN = 2x + 4

x = _____

RS = _____

MN = _____

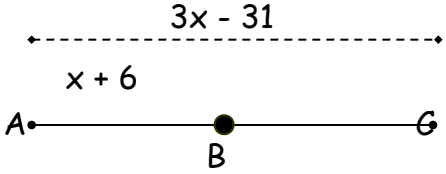
20.



x = _____ AB = _____

BC = _____ AC = _____

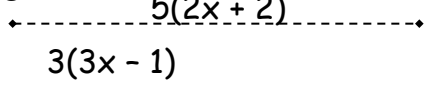
21.

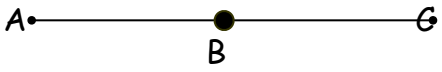


x = _____ AB = _____

BC = _____ AC = _____

BONUS





x = _____ AB = _____

BC = _____ AC = _____