Geometry: Segment Addition and Distance Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Draw a picture and then write the Segment Addition Postulate for the points described**.

1. S is between D and P 2. J is between S and H

**C is between A and E. For each problem, draw a picture representing the three points and the**

**information given. Solve for indicated segement**.

2. If AC = 24 in. and CE = 13 in., AE = \_\_\_\_\_. 3. If CE = 7in. and AE = 23 in., AC = \_\_\_\_\_.

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

4. Given : AC = 39 m

C

**.**

A

B

2x-8

x+17

x = \_\_\_\_\_\_\_\_

AB = \_\_\_\_\_\_\_

BC = \_\_\_\_\_\_\_

5. Given the figure and DG = (2x + 38) ft

D

O

G

4x- 3

2x + 21

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.)**

6. TU = 2x, UB = 3x + 1, TB = 21 7. TU = 4x-1, UB = 2x -1, TB = 5x

x = \_\_\_\_\_\_\_

TU = \_\_\_\_\_\_

UB = \_\_\_\_\_\_

x = \_\_\_\_\_\_\_

TU = \_\_\_\_\_\_

UB = \_\_\_\_\_\_

TB = \_\_\_\_\_\_\_

8. Find the distance between the following points:

 a. A(-1, 2), B(2, -4) **use Pythagorean theorem**

 b. C(11, -12), D(6, 2) **use distance formula**

 c. E(-10, 0), F(-7, 6) **use either method.**

9. Which of the segments in question 8 were congruent? \_\_\_\_$ ≅$ \_\_\_\_