**Objective: I will be able to apply the segment addition postulate.**

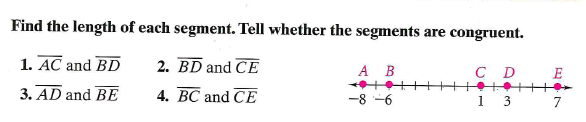


A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a segment is a point that divides the segment into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. A midpoint, or any line, ray, or other segment through a midpoint, is said to \_\_\_\_\_\_\_\_\_\_\_\_\_ the segment. Let’s draw a segment with its midpoint and label it below.

What equations could you write? 1)

2)



1. AC = \_\_\_\_\_ 2. BD = \_\_\_\_\_ 3. AD = \_\_\_\_\_ 4. BC = \_\_\_\_\_

BD = \_\_\_\_\_ CE = \_\_\_\_\_ BE = \_\_\_\_\_ CE = \_\_\_\_\_

Congruent? \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_

**Use the figure below to answer questions 5 – 9.**



5. Write an equation using the segment addition postulate. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. If RS = 15 and ST = 9, then RT = \_\_\_\_\_\_\_

7. If ST = 15 and RT = 40, then RS = \_\_\_\_\_\_

8. If RS = 12, ST = 2x + 1, and RT = 29, find the value of x. Then find the value of ST.

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

RT = \_\_\_\_\_

9. If RS = 3x + 1, ST = 2x – 2, and RT = 64, find the value of x, RS, and ST.

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

RS = \_\_\_\_\_

ST = \_\_\_\_\_



10. Look at 

If the length of is 300, what is the length of ?

11. Points *P*, *Q*, and *R* are collinear, with *Q* between *P* and *R*. What is the length of ?