1.5 Homework

Write your answers on notebook paper, not this sheet.

1. Write the Segment Addition Postulate.

For questions 2 – 5, points A, B, and C are collinear. B is between A and C.

2. If AB = 12 and BC = 15, then AC = ?
3. If BC = 43 and AC = 67, then AB = ?
4. If AB = 2x + 5, BC = 3x – 1, and AC = 39:
    a. Write an equation using the Segment Addition Postulate.
    b. Solve for *x*. Show all the steps.
    c. Solve for the lengths of AB and BC.
5. If AB = 4x + 2, BC = 2x – 7, and AC = 3x +7 :
    a. Write an equation using the Segment Addition Postulate.
    b. Solve for *x*. Show all the steps.
    c. Solve for the length AC.
6. Write the definition of *midpoint* found on page 32 of the book.
7. How many midpoints can a line segment have?
8. M is the midpoint of RS. RM = 3x + 2 and MS = 2x + 8.
    a. Draw a picture of the objects described. Label the points and lengths.
    b. Write an equation using the definition of midpoint.
    c. Solve for *x*. Show all the steps.
    d. Solve for the lengths of RM and MS.
9. A is the midpoint of XY. AX = 5x + 3 and AY = 7x – 11. Solve for the length of XY. Write an equation. Show the work.
10. D is the midpoint of AC. AD = 15 and AC = 4x – 36. Solve for the lengths of AC. Write an equation. Show the work.