Use the figure at the right for Exercises 8–11.

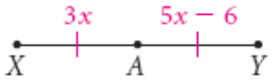
8. If $RS = 15$ and $ST = 9$, then $RT =$ ■.

9. If $ST = 15$ and $RT = 40$, then $RS =$ ■.

10. a. Algebra If $RS = 3x + 1$, $ST = 2x - 2$, and $RT = 64$, find the value of x.
b. Find RS and ST.

11. a. Algebra If $RS = 8y + 4$, $ST = 4y + 8$, and $RT = 15y - 9$, find the value of y.
b. Find RS, ST, and RT.

12. Algebra A is the midpoint of $\overline{XY}$.
a Find XA.
b. Find AY and XY.

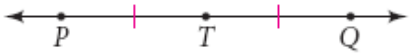


Algebra In Exercises 13–15, use the figure and find *PT*.

13. $PT = 5x + 3$ and $TQ = 7x - 9$

14. $PT = 4x - 6$ and $TQ = 3x + 4$

15. $PT = 7x - 24$ and $TQ = 6x - 2$



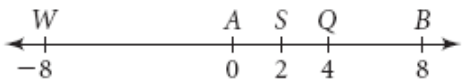
Use the figure at the right for Exercises 29–32.

29. Find the midpoint of $\overline{AB}$.

30. What is the coordinate of the midpoint of $\overline{QB}$?

31. What is the coordinate of the midpoint of $\overline{WA}$?

32. What is the coordinate of the midpoint of the segment formed by the two points you found in Exercises 30 and 31?



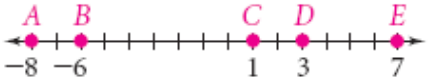
In Exercises 42–45, describe the statement as *true* or *false*. Explain.

42. $\overline{AB} \cong \overline{CD}$

43. $BD < CD$

44. $AC + BD = AD$

45. $AC + CD = AD$



Exercises 42–46