Find the length of each segment.

A B   C D   E
-8 -6   1 3   7

8. $\overline{AB}$ 9. $\overline{BD}$

10. $\overline{AD}$ 11. $\overline{CE}$

Use the number line at the right for Exercises 12–14.
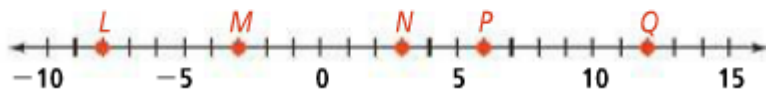
R   S   T

12. If $RS = 15$ and $ST = 9$, then $RT = \blacksquare$.

13. If $ST = 15$ and $RT = 40$, then $RS = \blacksquare$.

14. **Algebra** $RS = 8y + 4$, $ST = 4y + 8$, and $RT = 15y - 9$.
   a. What is the value of y?
   b. Find RS, ST, and RT.

Use the number line below for Exercises 15–18. Tell whether the segments are congruent.

L   M   N   P   Q
-10   -5   0   5   10   15
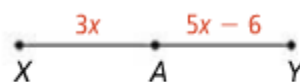
15. $\overline{LN}$ and $\overline{MQ}$ 16. $\overline{MP}$ and $\overline{NQ}$ 17. $\overline{MN}$ and $\overline{PQ}$ 18. $\overline{LP}$ and $\overline{MQ}$

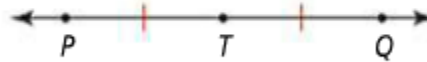19. **Algebra** A is the midpoint of $\overline{XY}$.
   a. Find XA.
   b. Find AY and XY.

         3x   5x − 6
X   A   Y

Algebra For Exercises 20–22, use the figure below. Find the value of PT.

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

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

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

36. On a number line, A is at -2 and B is at 4. What is the coordinate of C, which is $\frac{2}{3}$ of the way from A to B?

36a. A segment 30″ long is divided into two segments having lengths in the ratio of 2:3. What are the segment lengths?