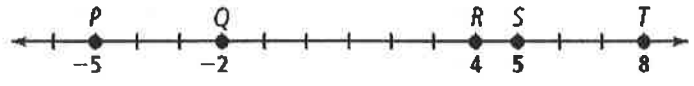


1-3 Practice Form K

Find the length of each segment. To start, find the coordinate of each endpoint.



1. \overline{PR} 2. \overline{QT} 3. \overline{QS}
 9 10 7

Use the number line at the right for Exercises 4-6.



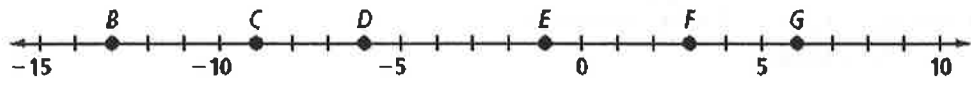
4. If $GH = 31$ and $HI = 11$, then $GI = \boxed{42}$.
 5. If $GH = 45$ and $GI = 61$, then $HI = \boxed{16}$.

6. Algebra $GH = 7y + 3$, $HI = 3y - 5$, and $GI = 9y + 7$.

- a. What is the value of y ? 9
 b. Find GH , HI , and GI .

60, 22, 88

Use the number line below for Exercises 7-9. Tell whether the segments are congruent. To start, use the definition of distance. Use the coordinates of the points to write an equation for each distance.



For Exercises 10-12, use the figure below. Find the value of KL .

10. $KL = 3x + 2$ and $LM = 5x - 10$

$KL = 20$

11. $KL = 8x - 5$ and $LM = 6x + 3$

$KL = 27$

12. $KL = 4x + 7$ and $LM = 5x - 4$

$KL = 51$



On a number line, the coordinates of D , E , F , G , and H are -9 , -2 , 0 , 3 , and 5 , respectively. Find the lengths of the two segments. Then tell whether they are congruent.

13. \overline{DG} and \overline{DH} No
12 14

14. \overline{DE} and \overline{EH} Yes
7 7

15. \overline{EG} and \overline{GH} No
5 2

16. \overline{EG} and \overline{FH} Yes
5 5

1-3 Practice (continued)

Form K

Suppose the coordinate of P is 2, $PQ = 8$, and $PR = 12$. What are the possible coordinates of the midpoint of the given segment?

17. \overline{PQ}

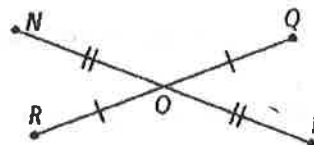
18. \overline{PR}

19. \overline{QR}

20. Suppose point J has a coordinate of -2 and $JK = 4$. What are the possible coordinates of point K ?

21. Suppose point X has a coordinate of 5 and $XY = 10$. What are the possible coordinates of point Y ?

Algebra Use the diagram at the right for Exercises 28–32.



22. If $NO = 17$ and $NP = 5x - 6$, find the value of x .

Then find NP and OP .

23. If $RO = 6 + x$ and $OQ = 2x + 1$, find the value of x .

Then find RO , OQ , and RQ .

24. If $NO = 3x + 4$ and $NP = 10x - 10$, find the value of x .

Then find NO , NP , and OP .

25. If $RO = 5x$ and $RQ = 12x - 20$, find the value of x .

Then find RO , OQ , and RQ .

26. **Vocabulary** What term describes the relationship between \overline{NP} and \overline{RQ} ?

27. **Reasoning** If $KL = 5$ and $KJ = 10$, is it possible that $LJ = 5$? Explain.

Yes, L could be the midpoint of KJ .