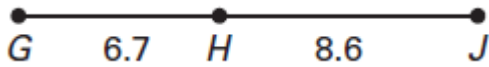


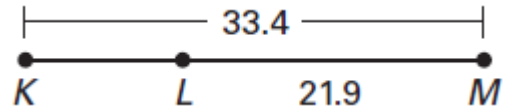
Name \_\_\_\_\_ Hour \_\_\_\_\_

Use the Segment Addition Postulate to find the indicated length.

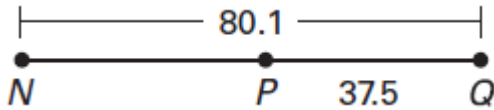
1. Find  $GJ$ .



2. Find  $KL$ .



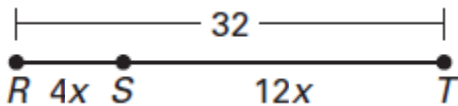
3. Find  $NP$ .



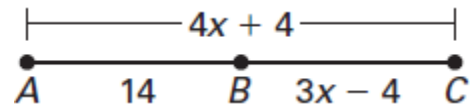
4. Find  $RT$ .



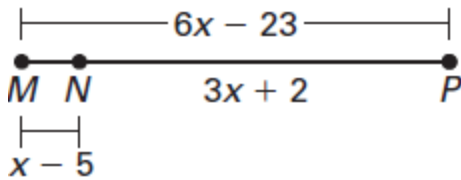
5. Find  $RS$ .



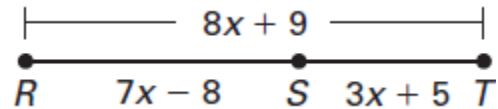
6. Find  $AC$ .



7. Find  $NP$ .



8. Find  $RT$ .



Suppose  $J$  is between  $H$  and  $K$ . Use the Segment Addition Postulate to solve for  $x$ . Then find  $HJ$  and  $JK$ .

9.  $HJ = 2x$ ,  $JK = 3x$ ,  $HK = 25$

10.  $HJ = \frac{x}{4}$ ,  $JK = 3x - 4$ ,  $HK = 22$

11.  $HJ = 5x - 4$ ,  $JK = 8x - 10$ ,  $HK = 38$

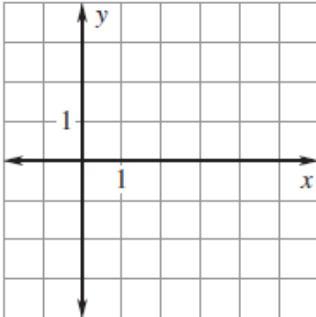
12.  $HJ = 5x - 3$ ,  $JK = x - 9$ ,  $HK = 5x$

# Segments & Congruence

Plot the given points in a coordinate plane. Then determine whether  $\overline{AB}$  is congruent to  $\overline{CD}$ .

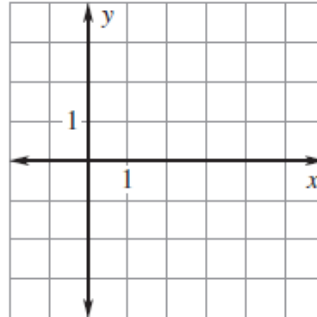
13.  $\overline{AB}$ :  $A(2,2), B(4,2)$

$\overline{CD}$ :  $C(1,-1), D(1,-3)$



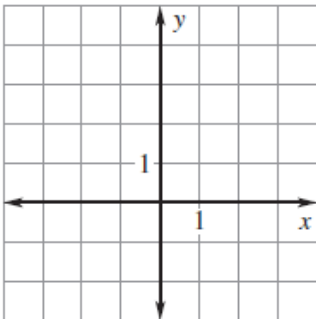
14.  $\overline{AB}$ :  $A(1,-3), B(4,-3)$

$\overline{CD}$ :  $C(3,3), D(3,-1)$



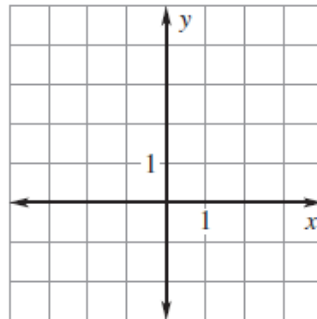
15.  $\overline{AB}$ :  $A(-3,4), B(2,4)$

$\overline{CD}$ :  $C(-1,4), D(-1,0)$



16.  $\overline{AB}$ :  $A(-3,-2), B(-3,4)$

$\overline{CD}$ :  $C(-3,1), D(3,1)$



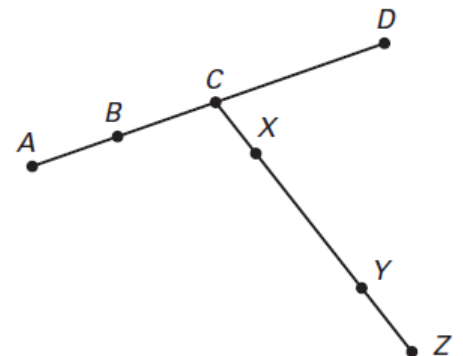
In the diagram,  $AB = BC = CX = YZ$ ,  $AD = 54$ ,  $XY = 22$ ,  $XZ = 33$ .  
Find the indicated length.

17.  $YZ$

18.  $AC$

19.  $CD$

20.  $CZ$



A race is being planned in your city. The course for the race is shown in the graph. The race starts at point A and ends at point F. The distance is in miles.

21. How many miles is the entire race?

22. How many miles would be eliminated from the race if the runners were told to turn left at point  $(6, 4.8)$  and then head straight towards the finish line?

