

Practice C

For use with pages 17–25

Draw a sketch of the three collinear points. Then write the Segment Addition Postulate for the points.

1. D is between T and Q .
2. M is between Q and N .
3. L is between T and W .
4. A is between X and Y .

In Exercises 5–8, use the following information.

S is between T and V . R is between S and T . T is between R and Q . $QV = 23$, $QT = 8$, and $TR = RS = SV$. Make a sketch and answer the following.

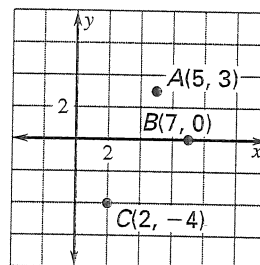
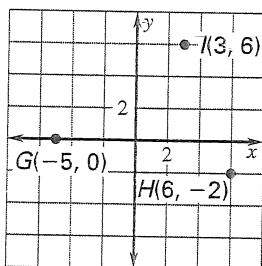
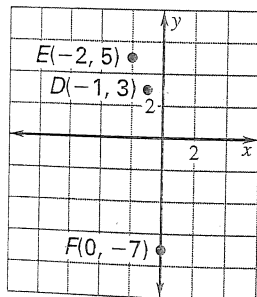
5. Find RS .
6. Find QS .
7. Find TS .
8. Find TV .

Suppose J is between H and K . Use the Segment Addition Postulate to solve for x . Then find the length of each segment.

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|--------------------|-------------------|-----------------------------|
| 9. $HJ = 3(x + 2)$ | 10. $HJ = 8x - 3$ | 11. $HJ = \frac{1}{3}x + 4$ |
| $JK = 3x - 4$ | $JK = 12x - 5$ | $JK = 2x + \frac{2}{3}$ |
| $KH = 44$ | $KH = 112$ | $KH = 2\frac{2}{3}x + 1$ |

Find the distance between each pair of points.

12. $D(-1, 3), E(-2, 5), F(0, -7)$
13. $G(-5, 0), H(6, -2), I(3, 6)$
14. $A(5, 3), B(7, 0), C(2, -4)$



Use the Distance Formula to decide whether $\overline{AB} \cong \overline{BC}$.

- | | | |
|----------------|----------------|---------------|
| 15. $A(0, -1)$ | 16. $A(-3, 1)$ | 17. $A(4, 2)$ |
| $B(-2, -4)$ | $B(1.5, -1.5)$ | $B(-1, -1)$ |
| $C(-4, -7)$ | $C(6, -3.5)$ | $C(-6, -4)$ |

18. **Marathon** The map at the right is being used to plan a 26.3 mile marathon. Coordinates are given in miles. The locations of the participating towns on the map are: Angel City (0, 0), Buster (4, 3), Clearfield (9, -2), and Curtis (-1, -4).

Which of the following planned routes is nearest to the 26.3 mile requirement?

- (a) Curtis to Clearfield to Angel City to Curtis
- (b) Curtis to Clearfield to Buster to Angel City to Curtis
- (c) Curtis to Buster to Clearfield to Curtis
- (d) Curtis to Buster to Angel City to Clearfield to Curtis

