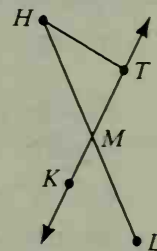


## Written Exercises

The numbers given are the coordinates of two points on a number line. State the distance between the points.

- A** 1. -6 and 9      2. -3 and -17      3. -1.2 and -5.7      4. -2.5 and 4.6

In the diagram,  $\overline{HL}$  and  $\overleftrightarrow{KT}$  intersect at the midpoint of  $\overline{HL}$ . Classify each statement as true or false.

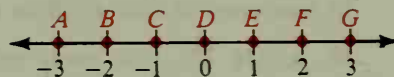


Exs. 5-18

5.  $\overline{LM} \cong \overline{MH}$       6.  $KM$  must equal  $MT$ .  
 7.  $\overline{MT}$  bisects  $\overline{LH}$ .      8.  $\overleftrightarrow{KT}$  is a bisector of  $\overline{LH}$ .  
 9.  $\overline{MT}$  and  $\overline{TM}$  are opposite rays.      10.  $\overline{MT}$  and  $\overline{MK}$  are opposite rays.  
 11.  $\overleftrightarrow{LH}$  is the same as  $\overleftrightarrow{HL}$ .      12.  $\overleftrightarrow{KT}$  is the same as  $\overleftrightarrow{KM}$ .  
 13.  $\overleftrightarrow{KT}$  is the same as  $\overleftrightarrow{KM}$ .      14.  $\overleftrightarrow{KT}$  is the same as  $\overleftrightarrow{KM}$ .  
 15.  $HM + ML = HL$       16.  $TM + MH = TH$   
 17.  $T$  is between  $H$  and  $M$ .      18.  $M$  is between  $K$  and  $T$ .

Name each of the following.

19. The point on  $\overleftrightarrow{DA}$  whose distance from  $D$  is 2  
 20. The point on  $\overleftrightarrow{DG}$  whose distance from  $D$  is 2  
 21. Two points whose distance from  $E$  is 2  
 22. The ray opposite to  $\overrightarrow{BE}$   
 23. The midpoint of  $\overline{BF}$   
 24. The coordinate of the midpoint of  $\overline{BD}$   
 25. The coordinate of the midpoint of  $\overline{AE}$   
 26. A segment congruent to  $\overline{AF}$



Exs. 19-26

In Exercises 27-30 draw  $\overline{CD}$  and  $\overline{RS}$  so that the conditions are satisfied.

27.  $\overline{CD}$  and  $\overline{RS}$  intersect, but neither segment bisects the other.  
 28.  $\overline{CD}$  and  $\overline{RS}$  bisect each other.  
 29.  $\overline{CD}$  bisects  $\overline{RS}$ , but  $\overline{RS}$  does not bisect  $\overline{CD}$ .  
 30.  $\overline{CD}$  and  $\overline{RS}$  do not intersect, but  $\overleftrightarrow{CD}$  and  $\overleftrightarrow{RS}$  do intersect.

- B** 31. In the diagram,  $\overline{PR} \cong \overline{RT}$ ,  $S$  is the midpoint of  $\overline{RT}$ ,  $QR = 4$ , and  $ST = 5$ . Complete.  
 a.  $RS = \underline{\quad? \quad}$       b.  $RT = \underline{\quad? \quad}$   
 c.  $PR = \underline{\quad? \quad}$       d.  $PQ = \underline{\quad? \quad}$



32. In the diagram,  $X$  is the midpoint of  $\overline{VZ}$ ,  $VW = 5$ , and  $VY = 20$ . Find the coordinates of  $W$ ,  $X$ , and  $Y$ .

