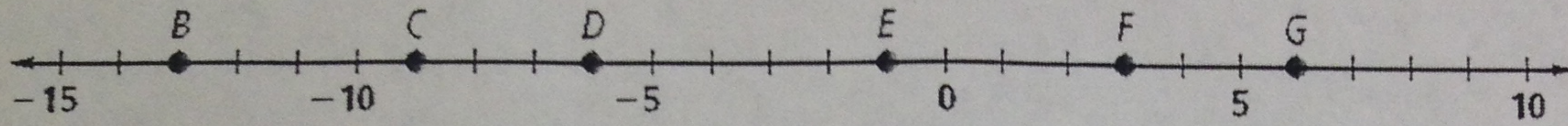


Midpoints

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.



7. \overline{CE} and \overline{FD}

8. \overline{CD} and \overline{FG}

9. \overline{GE} and \overline{BD}

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

10. \overline{PQ}

11. \overline{PR}

12. \overline{QR}

Angle Bisectors

\overline{QS} bisects $\angle PQR$. Solve for x and find $m\angle PQR$. Draw a diagram for each example!!

8. $m\angle PQS = 3x$; $m\angle SQR = 5x - 20$

9. $m\angle PQS = 2x + 1$; $m\angle RQS = 4x - 15$

10. $m\angle PQR = 3x - 12$; $m\angle PQS = 30$