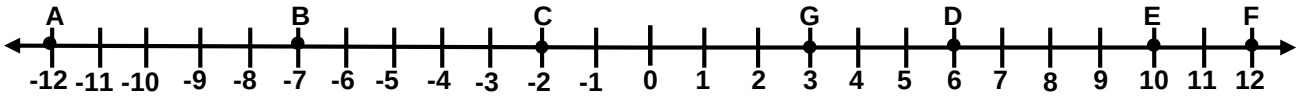
NAME_____**DATE**_____**PER.**_____

1.3 – MIDPOINT & SEGMENT BISECTOR

Use the number line below to find the coordinates of the midpoint of each segment.



1. $\overline{AB}$ Midpoint:_____	2. $\overline{BC}$ Midpoint:_____	3. $\overline{CD}$ Midpoint:_____
4. $\overline{AE}$ Midpoint:_____	5. $\overline{FC}$ Midpoint:_____	6. $\overline{GE}$ Midpoint:_____

W, R, and S are points on a number line, and W is the midpoint of $\overline{RS}$. For each pair of coordinates given, find the coordinate of the third point.

7. $R = 4, S = -6$ $W =$ _____	8. $W = -4, S = 2$ $R =$ _____

Find the indicated values.

9. B is between A and C. $AB = 2x + 1$, $BC = 3x - 4$, and $AC = 62$. Find the value of 'x', and determine if B is a bisector.

   $x =$ _____

   Bisector: YES or NO?

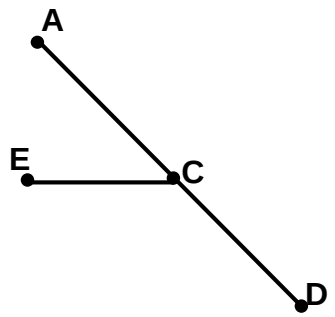
10. M is between L and N. LM = 7x – 1, MN = 2x + 4, and LN = 12. Find the value of 'x' an determine if M is a bisector.

    x = _____

    Bisector: YES or NO?

In the figure below, $\overline{EC}$ bisects $\overline{AD}$ at C. For each of the following, find the value of "x" and the measure of the indicated segment.

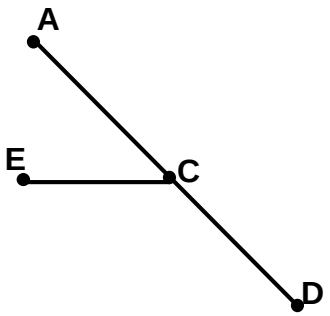
11. $AC = 3x + 6$ and $CD = 2x + 14$



$x =$ _____

$AC =$_____

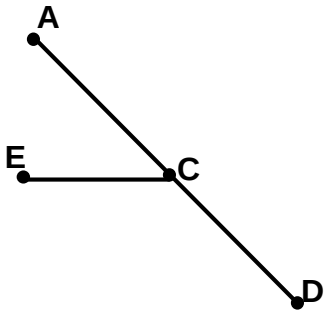
12. $AC = 5x - 8$ and $CD = 16 - 3x$



$x =$ _____

$AD =$ _____

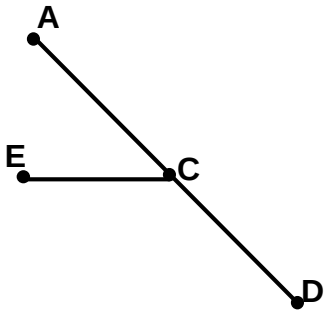
13. $AD = 6x - 4$ and $AC = 4x - 3$



$x =$ _____

$CD =$ _____

14. $AC = 3x - 1$ and $AD = 12 - x$



$x =$ _____

$CD =$ _____

Find the coordinates of the of the midpoint of each segment formed by the given points.

15. $(2, 4)$ & $(-4, 4)$ Midpoint:_____	16. $(-2, 2)$ & $(-4, -3)$ Midpoint:_____
17. $(3, -1)$ & $(4, -4)$ Midpoint:_____	18. $(-4, -4)$ & $(4, -4)$ Midpoint:_____

Given the coordinate of one endpoint of $\overline{AB}$ and its midpoint M, find the coordinates of the other endpoint.

19. $A\ (0, 9), M\ (2, 5)$ B(_____, _____)	20. $B\ (-5, 1), M\ (1, -1)$ A(_____, _____)
21. $A\ (-2, 3), M\ (0.5, 0.5)$ B(_____, _____)	22. $A\ (4, 2), M\ (-2, 10)$ B(_____, _____)