

Segment Addition & Segment Bisector & Midpoint

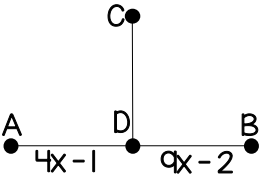
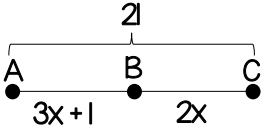
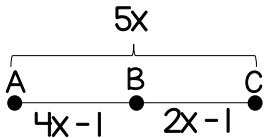
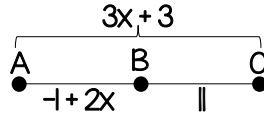
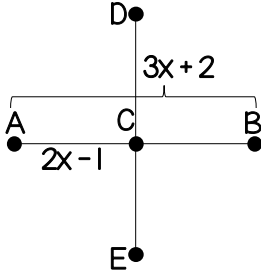
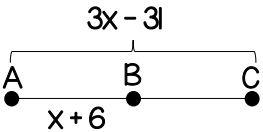
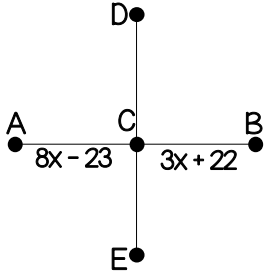
Name: _____

Date: _____ Class: _____

Directions: Draw a diagram, write the equation used to solve for 'x', and find the value of 'x' in the problems below. Show all work.

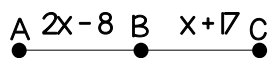
	DIAGRAM	EQUATION	VALUE OF 'X'
<p>1 point B is between A and C. $AC = 3x + 3$, $AB = -1 + 2x$, and $BC = 11$. Find 'x'.</p>			
<p>2 B is the midpoint of \overline{AC}. $AB = 2x - 8$ and $BC = x + 17$. Find 'x'.</p>			
<p>3 \overline{DE} bisects \overline{AB} at C. If $AC = 8x - 23$ and $CB = 3x + 22$. Find 'x'.</p>			
<p>4 point B is between A and C. $AC = 22$, $BC = x + 14$, and $AB = x + 10$. Find 'x'.</p>			

	DIAGRAM	EQUATION	VALUE OF 'X'
<p>5 \overline{DE} bisects \overline{AB} at C. If $AC = 2x - 1$ and $AB = 3x + 2$. Find 'x'.</p>			
<p>6 B is between A and C. $AB = 3x + 1$, $BC = 2x$, and $AC = 21$. Find 'x'.</p>			
<p>7 B is between A and C. $AB = 4x - 1$, $BC = 2x - 1$, and $AC = 5x$. Find 'x'.</p>			
<p>8 \overline{CD} bisects \overline{AB} at D. If $AD = 4x - 1$ and $DB = 9x - 21$. Find 'x'.</p>			
<p>9 B is the midpoint of \overline{AC}. $AB = x + 6$ and $AC = 3x - 31$. Find 'x'.</p>			

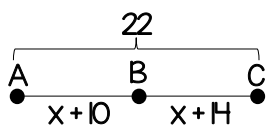
	$x = -1$		$x = 4$
$2x - 1 + 2x - 1 = 3x + 2$		$x = 7$	$x + 6 + x + 6 = 3x - 1$
$4x - 1 + 2x - 1 = 5x$			$2x - 8 = x + 17$
	$x = 13$	$4x - 1 = 9x - 21$	$x = 4$
$x = 9$	$8x - 23 = 3x + 22$	$x + 10 + x + 14 = 22$	

$$3x + 1 + 2x = 21$$

$$x = 25$$



$$x = 4$$



$$x = 2$$

$$-1 + 2x + 11 = 3x + 3$$