**Using Operations with Linear Equations**

**Complete the following problems.**

1. When $4x - 2$ is added to $-2x + 7$, the sum is:
2. If $a = 11x – 5$ and $b = 2x + 3$, what is the value of$ a + b$?
3. Three consecutive numbers are added together and then their sum is multiplied by 4.
	* 1. Some of the equations below represent the total using algebra. Circle all that apply.

|  |  |
| --- | --- |
| Total = $4x + 4x + 1 + 4x + 2$ | Total= $4x + 4x + 4 + 4x + 8$ |
| Total = $4x + 4(x + 1) + 4(x + 2)$ | Total= $x + x + 4 + x + 8$ |

* + 1. Explain your answers.
1. 
2. Find the sum of $-\frac{41}{5}x+5$ and $-3\frac{3}{5}x+2$.
3. When $-1.3x-4$ is subtracted from $-3x-5.6$, the result is:
4. If $a = -4x + 9$ and $b = 7x – 8$, what is the value of $a – b$?
5. The result of subtracting $-9x – 8$ and $-4.3x + 7$ is:
6. What is the factored form of $63x - 9$?
7. Expand $6(-\frac{13}{3}x+8)$?
8. Sophia says that $-5(x – 3) + 2$ and $-5x + 17$ are equivalent. Do you agree? Explain by solving and showing your work.
9. What is the area of the rectangle below?



1. Write an expression for the sequence of operations.
	* 1. Add 7 to x, subtract the result from 3, and then double what you have.
		2. Add 3 to x, triple what you have, and then subtract 5 from the result.