

**TASK 2.9.5: ALICIA'S HOMEWORK****Solutions**

Alicia lost part of her algebra homework. Her assignment was to use algebra tiles to solve equations and relate the equations to the graph and the table. All Alicia has left of her problem is the table. Help Alicia create a possible algebra tile representation for her table. Explain how you used the table to create the equations.

x	$y_1$	$y_2$
-4	-5	-23
-2	1	-11
0	7	1
2	13	13
4	19	25

Alicia can see the solution is at the coordinate point (2, 13)

Explain this line on the table -

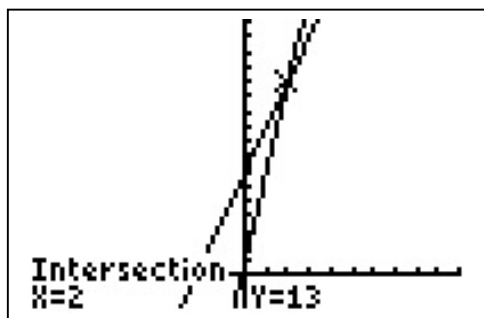
x	$y_1$	$y_2$
0	7	1

The y-intercept of  $y_1$  is at (0, 7) and the y-intercept of  $y_2$  is at (0, 1)

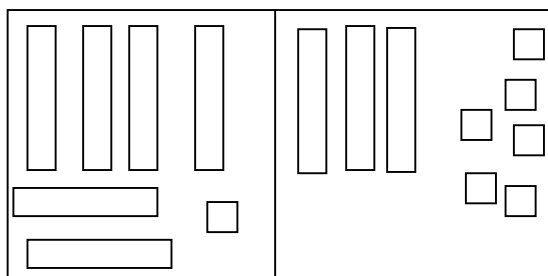
Write the equations using the tiles and create the graph that fits the data.

For equation  $y_1$  the y-intercept is (0, 7) and another point is (2, 13). This gives a rate of change of 6 in the y-value compared to 2 in the x-value, or 3 to 1 so the equation is  $y_1 = 3x + 7$

For equation  $y_2$  the y-intercept is (0, 1) and another point is (2, 13). This gives change in y, 12, compared to change in x, 2, for a rate of change of 6 to 1, so the equation is  $y_2 = 6x + 1$ .



Possible algebra tile representation:



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