8.EE Find the Change

Task

a. The table below shows two coordinate pairs (x, y) that satisfy the equation $y = mx + b$ for some numbers m and b.

x	y
2	y_1
5	y_2

i. If $m = 7$, determine possible values for y_1 and y_2. Explain your choices.

ii. Find another pair of y-values that could work for $m = 7$. Explain why they would work. How do these y-values compare to the first pair you found for $m = 7$?

iii. Use the same x-values in the table and find possible values for y_1 and y_2 if $m = 3$. Explain your choices.

iv. Find another pair of y-values that could work for $m = 3$. Explain why they would work. How do these y-values compare to the first pair you found for $m = 3$?

b. Each of the three tables below shows two coordinate pairs (x, y) that satisfy the equation $y = mx + b$ for some numbers m and b. If $m = 3$ in each case, find possible values for y_1 and y_2 for each pair of x-values given.

i.

x	y

4	y_1
9	y_2

ii.

x	y
2	y_1
13	y_2

iii.

x	y
-1	y_1
14	y_2

iv. Suppose we take all six x-values from the three tables above. Can you find six corresponding y-values so that all the coordinate pairs satisfy the same equation if $m = 3$? Fill out the table below and explain how you know they will all work with the same equation.

x	y
4	
9	
2	
13	
-1	
14