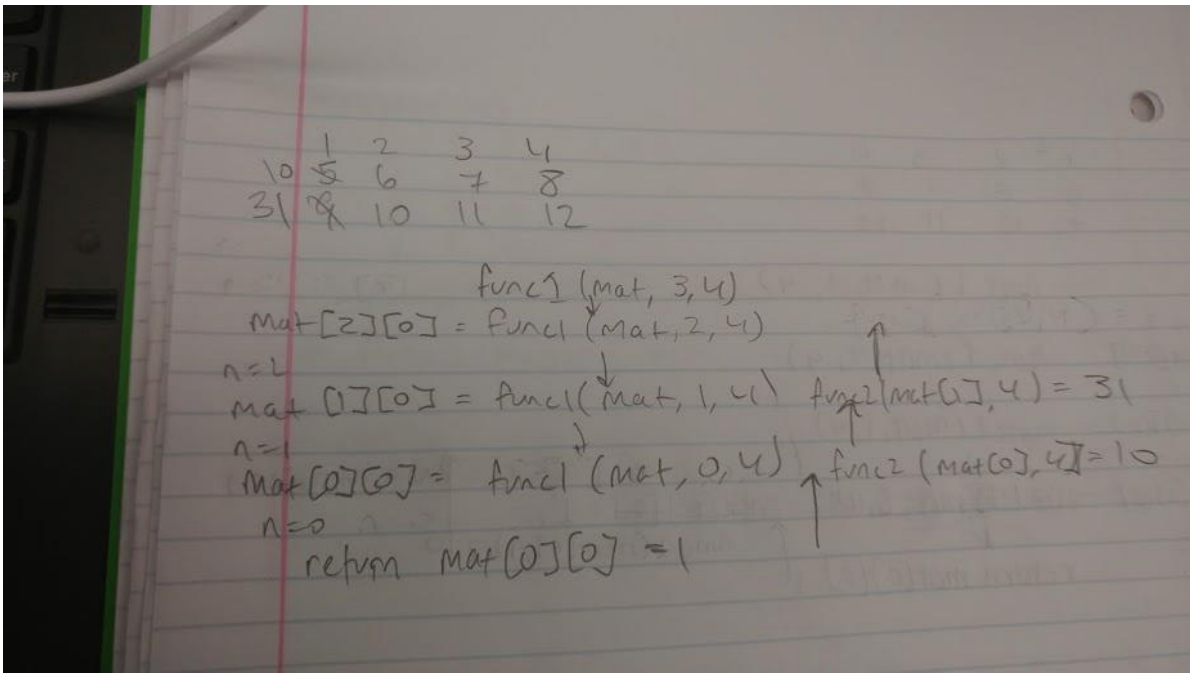

The end result of Mat is seen at the top right

1 2 3 4

10 6 7 8

31 10 11 12.

The way this function works is that each value in the leftmost column is set to func1(mat,n-1,4). This continues up the stack until it hits the base condition where n = 0, and then it returns mat[0][0], which in this case is 1.

Then the second part of the if statement is carries out where func(2) is called. Essentially func2 will sum up the row above and put that in the first value of the next row. Mat[0][0] is replaced with one, Mat[1][0] is replaced with 10, mat [2][0] is replaced with 31.