

Name:	ID:	Section:
-------	-----	----------

Question 1 [15 Points]

Write a function named *replace_array* that would replace each element of a 2D array with the **magic number**. The **magic number** for an index (i, j) is defined as

magic number = (Sum of all elements in row i, excluding A[i][j])

* (Sum of all elements in column j, excluding A[i][j]).

[You are not allowed to use any built-in functions sum()]

Sample Input:	Sample Output:	Explanation:																								
<table border="1"> <tr><td>1</td><td>2</td><td>3</td></tr> <tr><td>4</td><td>5</td><td>6</td></tr> <tr><td>9</td><td>8</td><td>7</td></tr> <tr><td>2</td><td>8</td><td>1</td></tr> </table>	1	2	3	4	5	6	9	8	7	2	8	1	<table border="1"> <tr><td>75</td><td>84</td><td>42</td></tr> <tr><td>132</td><td>180</td><td>99</td></tr> <tr><td>105</td><td>240</td><td>170</td></tr> <tr><td>126</td><td>45</td><td>160</td></tr> </table>	75	84	42	132	180	99	105	240	170	126	45	160	<p>Consider index (2, 1). The Sum of all elements in row 2, excluding A[2][1] is $9+7 = 16$. The Sum of all elements in column 1, excluding A[2][1] is $2+5+8=15$, so index (2, 1) will take the value of $16*15=240$. The process will be the same for all the indices.</p>
1	2	3																								
4	5	6																								
9	8	7																								
2	8	1																								
75	84	42																								
132	180	99																								
105	240	170																								
126	45	160																								