# Programming for Beginners – 24 April 2016

## Problem 5. Multiply Targeted Cell

Write a program which reads from the console **dimensions of a matrix** and **matrix elements values**. Get a **targeted cell** and **multiply** **its value** with **the sum of all neighboring cells**. The **neighboring cells** must **change their values too**. **Each one** should be **the product** of **its initial value** and **the initial value of the targeted cell**. Then **print on the console updated matrix**.

### Input

The input data should be read from the console:

* The **first line** holds the number of **rows – R** and **columns – C,** separated by space.
* The **next R lines** hold the **matrix values**. Each line holds **C** **integers**, separated by space.
* The **last line** holds **the position** (targeted **row** and targeted **col**) **of the targeted cell**, separated by space

The **input data will always be valid** and in the format described. **There is no need to check it explicitly**.

### Output

The output should be printed on the console. The elements of each row should be separated by space.

### Constraints

* The **dimensions** of the matrix **(R and C)** will be a **positive integer numbers** in the range **[3...20]**.
* The **values of the cells** will be an **integer numbers** in range **[-16,300... 16,300]**.
* The **targeted row** will be an **integer number** in the range **[1...R-2]**.
* The **targeted column** will be an **integer number** in the range **[1...C-2]**.

### Examples

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comments** |
| 5 5  10 12 14 16 17  10 12 14 16 17  10 12 14 16 17  10 12 14 16 17  10 12 14 16 17  2 2 | 10 12 14 16 17  10 168 196 224 17  10 168 1568 224 17  10 168 196 224 17  10 12 14 16 17 | Targeted cell is [2,2] = 14  The sum all neighboring cells is:  12 + 14 + 16 + 12 + 16 + 12 + 14 + 16 = 112  The targeted cell new value = 14 \* 112 = 1568  Neighboring cells new values:  [1,1]=12\*14=168; [1,2]=14\*14=196; [1,3]=16\*14=224;  [2,1]=12\*14=168; [2,3]=14\*14=224;  [3,1]=12\*14=168; [3,2]=14\*14=196; [3,3]=16\*14=224 |
| **Input** | **Output** | |
| 6 4  0 105 420 480  1 143 624 744  2 182 628 488  3 226 326 538  4 263 376 406  5 -1 -2 -3  4 2 | 0 105 420 480  1 143 624 744  2 182 628 488  3 84976 122576 202288  4 98888 659128 152656  5 -376 -752 -1128 | |