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