Level 2

> Level 2

Glados:
Great work! You're starting to remember. Here's the catch - this new planet, how do I put it... it's covered in color. Actually, it's the most colorful thing I've ever seen.

You'll have to examine the surface of this planet.

Task for Level 2:

Map the tiles from the planet surface

> Level 2

- The planet is a 2D grid consisting of cells
- Each cell has a set of **coordinates**, **(i, j)** (i=row, j=column)
- Each cell has a **color**, **(R, G, B)**
- Your mapping system should map the surface onto a new grid using this formula

new[i][j] = distance(old[i][j], old[i][j+1])

- Where the distance is the same as in the previous level

> Level 2

Input format:

A matrix where each field contains three integers for RGB values

<NrRows> <NrColumns>

<R> <G> <B> … <R> <G> <B>

…

<R> <G> <B> … <R> <G> <B>

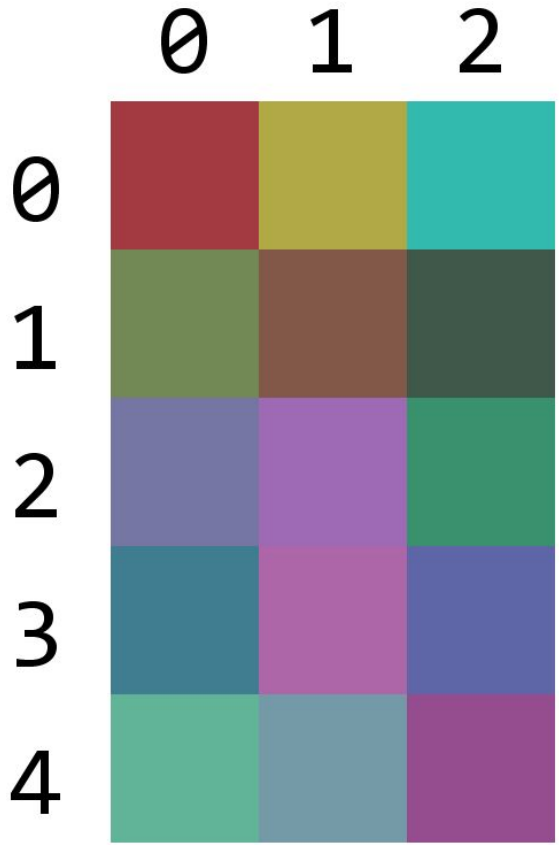
Output format:

A matrix with one less column, containing the distances according to the given formula

<D> … <D>

…

<D> … <D>



> Level 2

Example

Input sequence:

5 3
163 58 65 177 168 70 51 186 175
114 136 85 130 88 73 64 88 73
118 118 165 158 105 181 58 145 110
65 125 144 173 102 168 95 102 168
97 180 151 115 154 166 149 77 144

Output sequence:

111 165
52 66
45 129
113 78
35 87