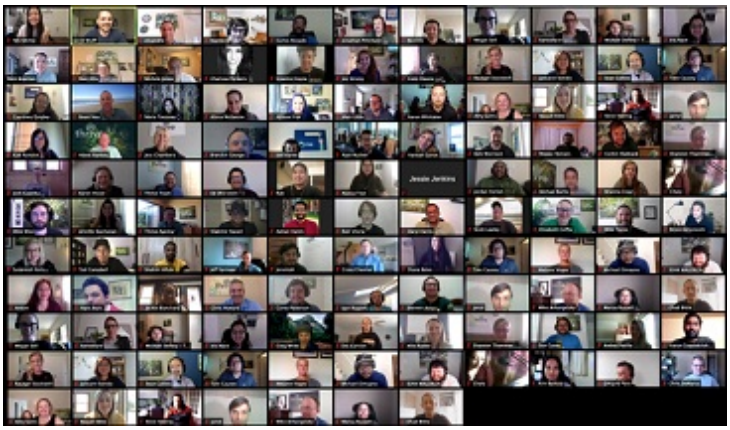
C - Maximizing the Audience

Context

Video conferencing is an increasingly popular tool and it is used in many aspects of the daily life. So, we have decided to create our own video conference system and become millionaires.



The number of attendees in a video conference can be very varied, from 1 person (a self-conference) to several thousand people. We want to show the images of the participants as large as possible in the screen of the application.

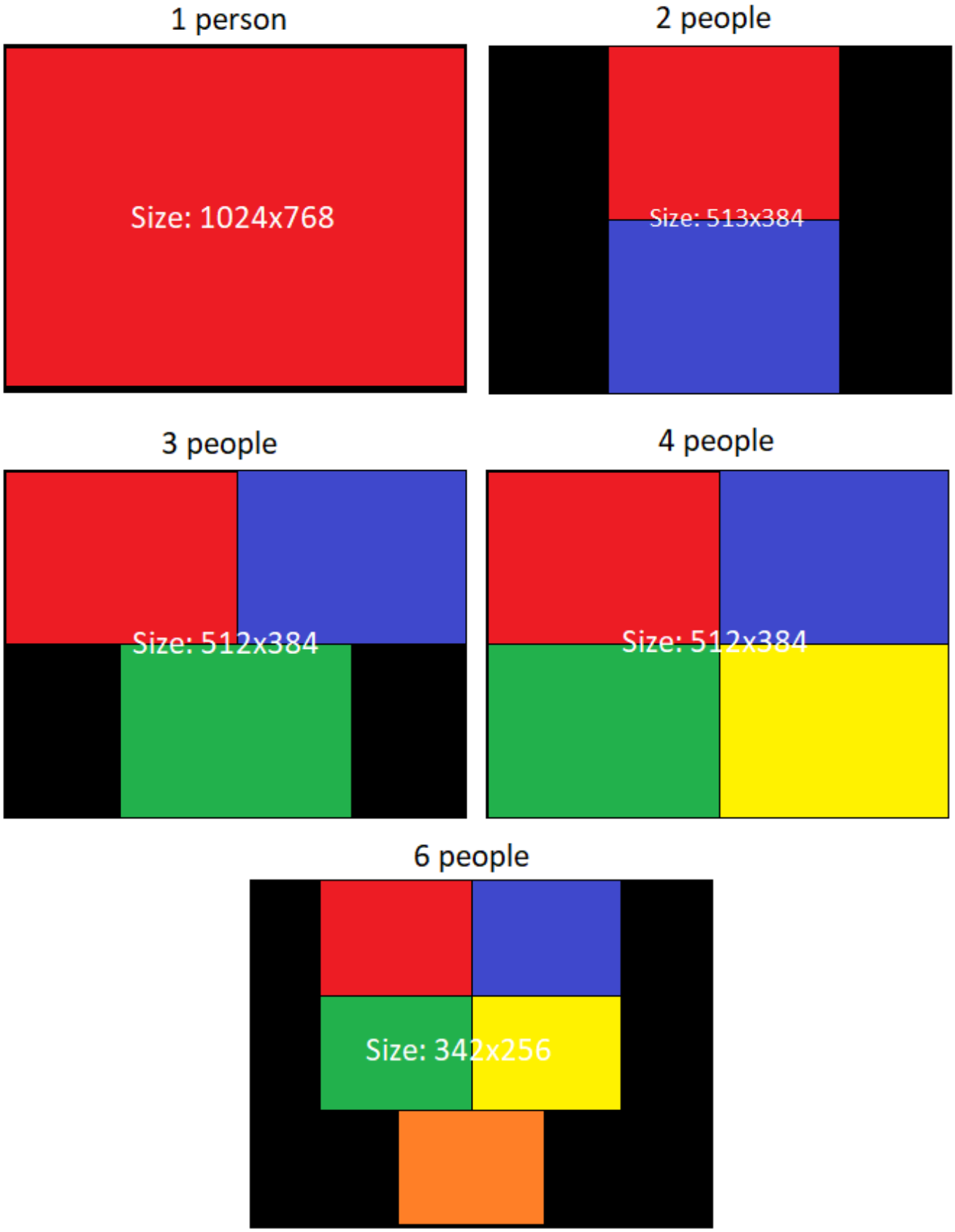
Your task is to compute the maximum size of the images that can be shown.

The Problem

We have the screen size of the application, $W \times H$ (width × height, in pixels), the total number of participants, N, and the original size of the images, $w \times h$ (width × height, in pixels). You have to compute the maximum size in which the images have to be scaled, $w' \times h'$ (width × height, in pixels), meeting the following restrictions:

- All the N input images should be scaled to exactly the same size, $w' \times h'$.
- It has to be possible to arrange the N scaled images in the screen, so that they can be shown without overlapping between them.
- The aspect ratio of the images should be maintained, that is, the ratio w/h has to be the same as w'/h'. Since this cannot always be possible, a difference of less than 1 pixel is allowed. This is done in the following way. If we scale the image to an arbitrary width w', then the height should be $h' = w' \cdot h/w$, we can take floor(h') or ceil(h') (round down or up, respectively). Similarly, if we scale to an arbitrary height h', we can take the corresponding floor(w') or ceil(w') for $w' = h' \cdot w/h$. For example, suppose the original image size is 100x33. If we scale it to 10 pixels width, the height should be 3.3 pixels; since it must be an integer, both 3 or 4 pixels height would be allowed.

For example, suppose the screen resolution is 1024×769 pixels and the input images are 640×480 pixels. The optimal arrangements and sizes for 1, 2, 3, 4 and 5 images are shown in the following image.



The Input

The input can contain several test cases. The number of test cases is indicated in the first line.

Each test case contains 5 integer numbers separated by blank spaces: *W* and *H*, indicating the width and height of the screen, between 100 and 1000000, inclusive; *N*, the total number of participants, between 1 and 10000, inclusive; *w* and *h*, the width and height of the original images, between 1 and 1000000, inclusive.

The Output

For each test case, you have to produce a line with two integer numbers separated by a blank space: *w′ h′*, indicating the optimal size of the scaled images, width and height, respectively.

Sample Input

```
5
1024 769 1 640 480
1024 769 2 640 480
1024 769 3 640 480
1024 769 4 640 480
1024 769 5 640 480
```

Sample Output

```
1024 768
513 384
512 384
512 384
342 256
```

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