In this question, you will be practicing filtering by hand on the following image. You will enter your final result for each question in the provided empty tables.

| 2 | 0 | 0 | 1 | 3 |
|---|---|---|---|---|
| 1 | 2 | 0 | 7 | 0 |
| 1 | 0 | 1 | 0 | 2 |
| 1 | 0 | 2 | 0 | 0 |

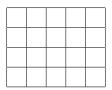
Note that you do not have to fill all the cells. If a cell contains a number that is not an integer, enter it as a fraction.

## Question (1a)

Apply the correlation filter to the image with **no padding**.

| 0  | 0 | 1 |
|----|---|---|
| 0  | 0 | 0 |
| -1 | 0 | 0 |

Enter your final result here in integer or fraction:



## Question (1b)

Apply the convolution filter to the image with **no padding**.

| 0  | 0 | 1 |
|----|---|---|
| 0  | 0 | 0 |
| -1 | 0 | 0 |

Enter your final result here in integer or fraction:

## Question (1c)

Apply the filter to the image with **zero padding** to make the input image and the output have the same shape. **Note:** zero padding means to pad your image with zeros; it is not the same as "no padding".

| 1/9 | 1/9 | 1/9 |
|-----|-----|-----|
| 1/9 | 1/9 | 1/9 |
| 1/9 | 1/9 | 1/9 |

Enter your final result here in integer or fraction: