ESTIMATION OF NUMBER OF OPERATIONS

Let I be an image of size NxN

Let B, C and D are 3 structuring elements:
  B: square MxM
  C: 1xM
  D: Mx1

If B = dilation_C (D) = dilation_D (C)

```
        B (square MxM)
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     |                |
     |                |
     |                |
     |                |
     |                |
     |                |
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        C (1xM)                D (Mx1)
     ------------------      ----
     |                |      |  |
     ------------------      |  |
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                             |  |
                             ----
```

then the dilation by structuring element B can be
computed by sequentially composing dilations by C
and by D:

```
  dilation_B (I) = dilation_D ( dilation_C (I) )
                 = dilation_C ( dilation_D (I) )
```

In order to consider the estimated number of operations
associated to both ways, we are going to assume:

- The maximum (or minimum) of n numbers can be computed
using (n-1) elementary maximum (or minimum) operations.
- Border effects are disregarded, i.e., all pixels
are going to be equally considered.

Option of dilation_B (I)

Number of elementary maximum operations:
number of pixels x number of operations per pixel

(NxN) x (MxM - 1)

Option of dilation_D (dilation_C (I))

Number of elementary maximum operations
(2 sequential dilations):

((NxN) x (M - 1)) + ((NxN) x (M - 1)) =
2 x (NxN) x (M - 1)