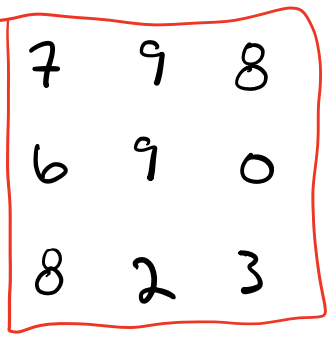
Q3. Part 2

$$\text{Input } X = \begin{matrix} 7 & 5 & 0 & 0 & 3 & 2 \\ 6 & 4 & 5 & 1 & 4 & 8 \\ 9 & 0 & 2 & 2 & 5 & 4 \\ 6 & 3 & 4 & 7 & 9 & 8 \\ 5 & 7 & 5 & 6 & 9 & 0 \\ 7 & 9 & 0 & 8 & 2 & 3 \end{matrix}$$



$$\text{Filter } f = \begin{matrix} 1 & 0 & -1 \\ 2 & 0 & -2 \\ 1 & 0 & -1 \end{matrix}$$

I found the activation map by sliding the red square across the input matrix and I used numpy to calculate each dot product by doing

`np.sum(a*f)`

Activation Map From The First Layer

16	9	-4	-18
17	-5	-10	-12
11	-9	-17	2
9	-1	-15	16

Q3.3

Output from applying max pooling on the output from Q3.2.

I slid the 2 x 2 red square filter across the activation map and took the max value.

17	-4
11	16