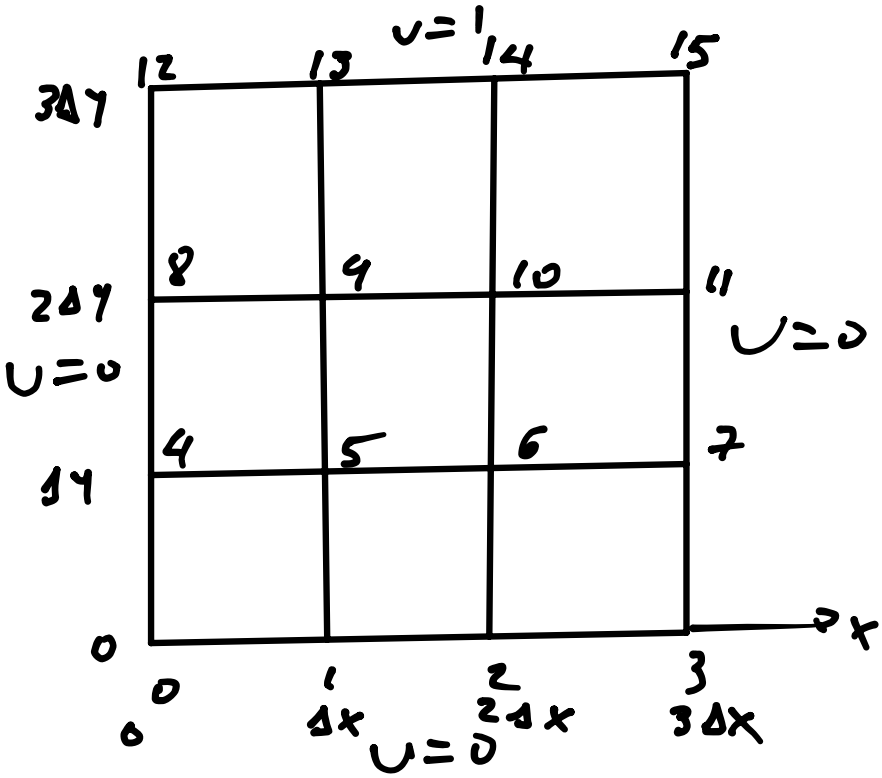
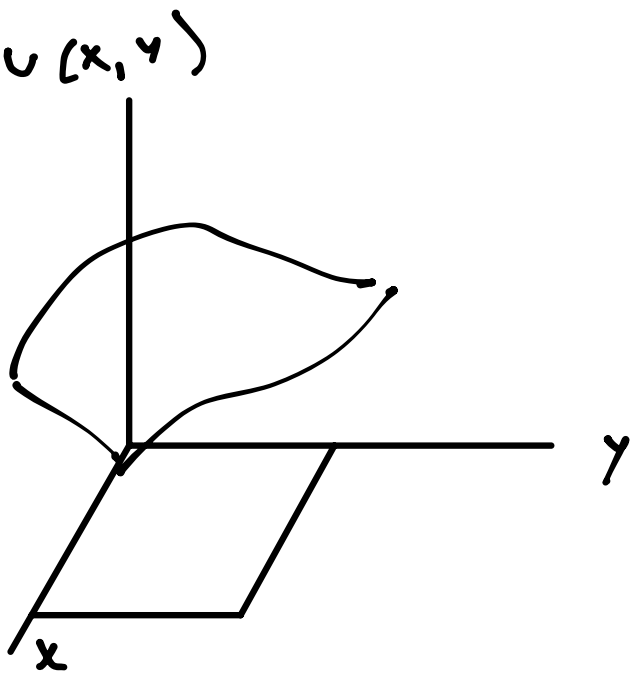


$$\nabla^2 U = 0$$

$$\frac{\partial^2 U}{\partial x^2} + \frac{\partial^2 U}{\partial y^2} = 0$$



	0	1	2	3
0	0	0.06666…	0.133333	0.2
1	0	0.06666…	0.133333	0.2
2	0	0.06666…	0.133333	0.2
3	0	0.06666…	0.133333	0.2

X

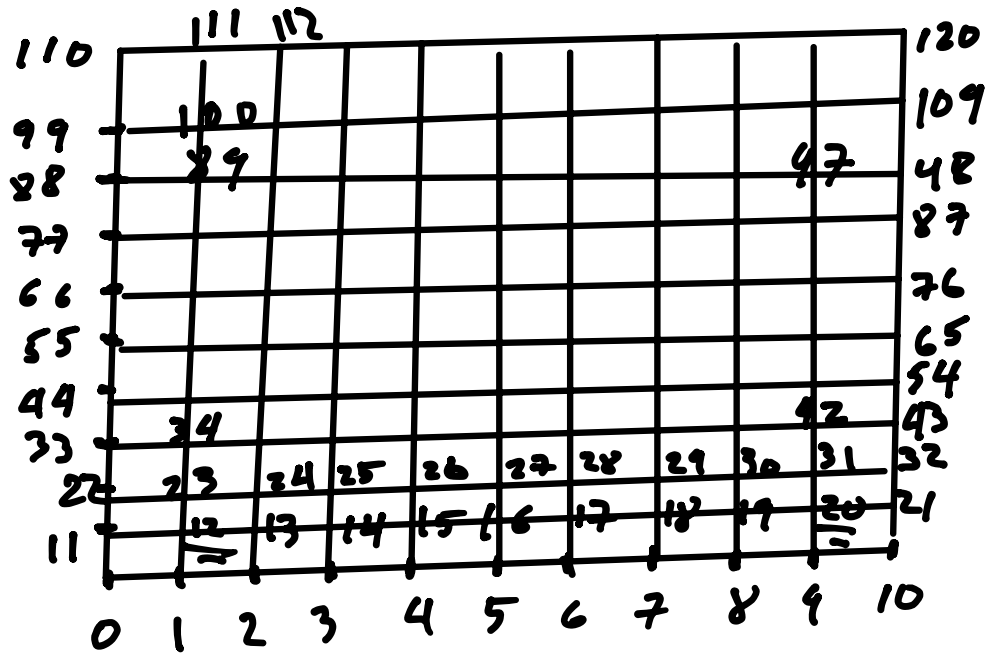
	0	1	2	3
0	0	0	0	0
1	0.03333…	0.03333…	0.03333…	0.03333…
2	0.06666…	0.06666…	0.06666…	0.06666…
3	0.1	0.1	0.1	0.1

Y

$$U = \begin{bmatrix} U_0 & U_1 & U_2 & U_3 \\ U_4 & U_5 & U_6 & U_7 \\ U_8 & U_9 & U_{10} & U_{11} \\ U_{12} & U_{13} & U_{14} & U_{15} \end{bmatrix}$$

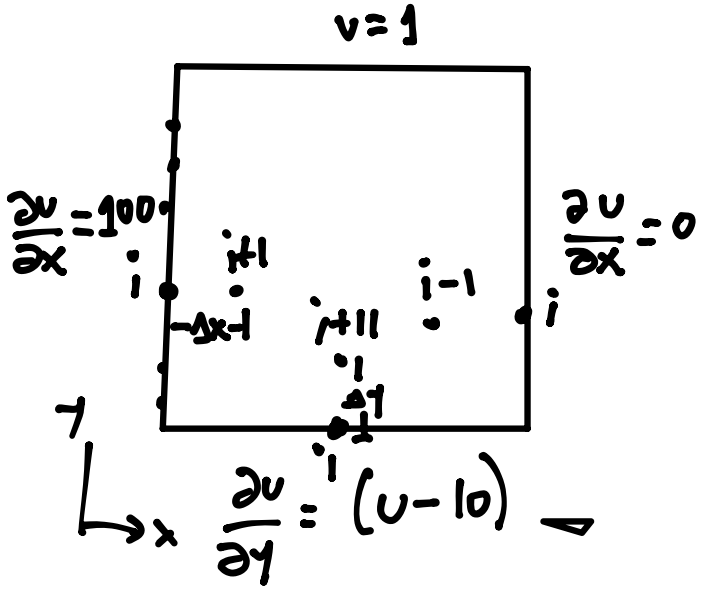
	0	1	2	3
0	0	2.52637...	0	0
1	0	0.246154	0.246154	0
2	0	0.553846	0.553846	0
3	1	1	1	1

U



12 : 21

[12 : -- 20]



$$\nabla^2 u = 0$$

IZQ

$$\frac{U_{i+1} - U_i}{\Delta x} = 100$$

DER

$$U_i - U_{i-1} = 0$$

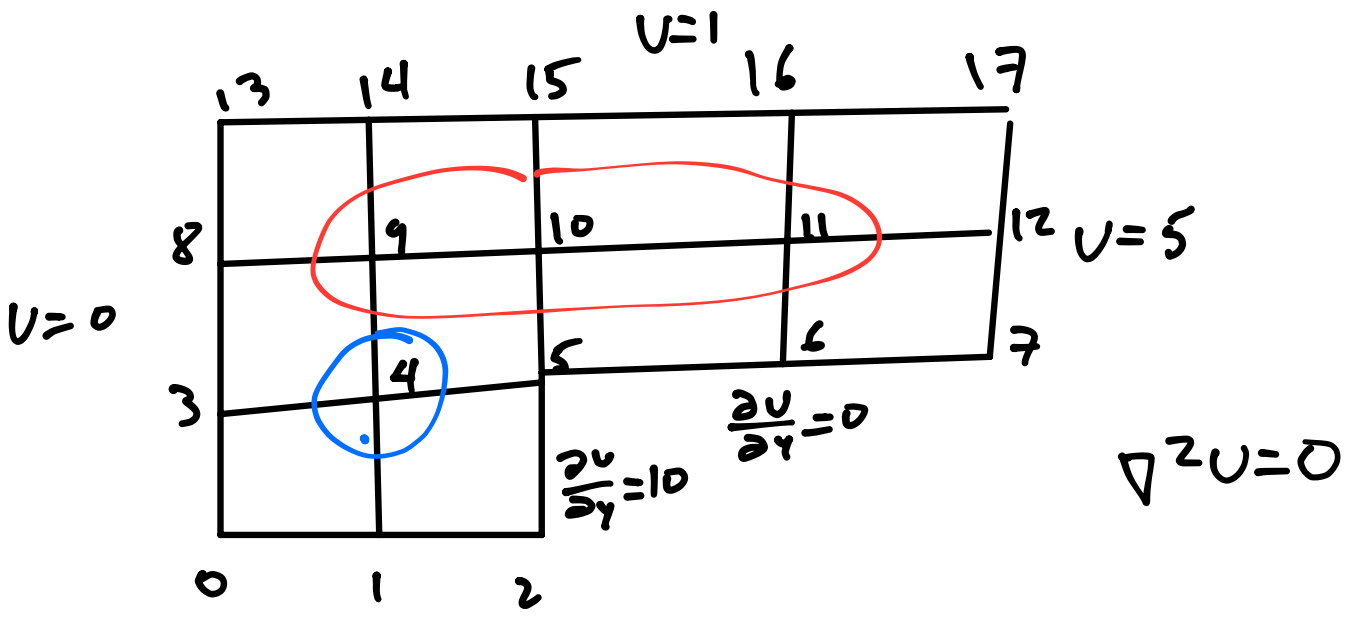
Δx

ABAJO

$$\frac{U_{i+11} - U_i}{\Delta y} = U_i - 10$$

$$\frac{\partial^2 U}{\partial^2 x^2} + \frac{\partial^2 U}{\partial y^2} - 100U = 0$$

$$\frac{U_{i+1} - 2U_i + U_{i-1}}{\Delta x^2} + \frac{U_{i+11} - 2U_i + U_{i-11}}{\Delta y^2} - 10U_i = 0$$



$\nabla^2 U = 0$

Internos $i = (9, 10, 11, 4)$

$i-1$ i $i+1$

$i+5$

$i-3$

$10 \rightarrow$ $i-1$ $i+5$ i $i+1$ $i-5$