```
x = np.linspace(-3,3,128)
t = np.linspace(0,10,64)
```

```
x = x.reshape(128,1)
t = t.reshape(1,64)
```

$d = x - 2*t \rightarrow (128, 64)$

```
for ix in x:
    for it in t:
        x - 2*t
```

$d[0,0] = -3 - 2*0 = -3$

x t

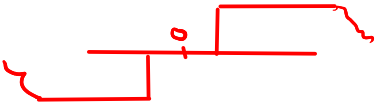
Πρίσμα με υπολογισμούς.

$u(x,t)$

$\forall t$

Άσκηση 2

$$\rightarrow \tilde{f}(x,t) = \begin{cases} f(x,t), & x>0 \\ 0, & x=0 \\ -f(x,t), & x<0 \end{cases}$$

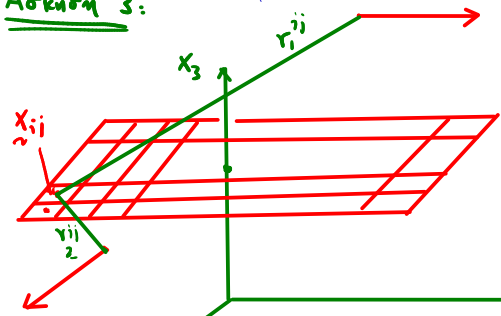


$$\rightarrow \tilde{u}(x,0) = \begin{cases} u(x,0) \\ 0 \\ -u(x,0) \end{cases} \qquad \rightarrow \tilde{u}_t(x,0) = \begin{cases} u_t(x,0) \\ 0 \\ -u_t(x,0) \end{cases}$$

λύση $\tilde{u}(x,t)$, $x \in \mathbb{R}$

$$u(x,t) = \tilde{u}(x,t), \quad x \geq 0$$

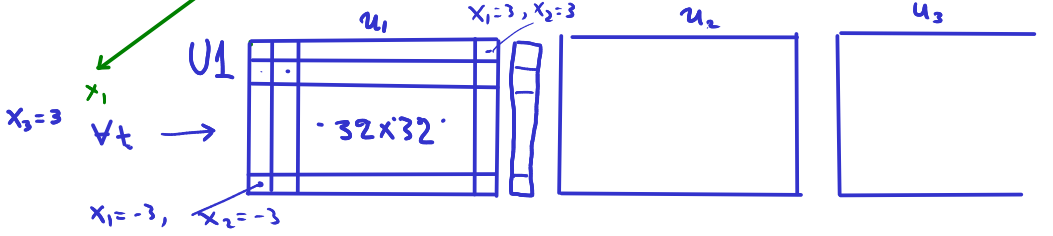
Άσκηση 3:



32x32

$u_i(\underline{x},t) = u_i(x_1,x_2,x_3,t)$, $i=1,\dots,3$

def u1(x1,x2,x3,t)



plt.pcolor(U1)

plt.colorbar()

t = 5