

```
commandwindow
clear
clc
c=2.2;
x0=0;
xf=6;
t0=0;
tf=0.3;
dx=0.3;
dt=0.02;
salome=(tf-t0)/dt;
sally=(xf-x0)/dx;
joba=c*dt/(dx^2);
t=[t0:dt:tf];
x=[x0:dx:xf]
faves=0;
faves(1:salome+1,1)=0;
faves(1,1:sally+1)=3*(x.^2);
faves(1:salome+1,sally+1)=faves(1,sally+1);
for j=1:salome
    i=2:sally
        faves(j+1,i)=(joba*faves(j,i-1))+((1-(2*joba))*faves(j,1))+(joba*faves(j,i+1));
    end
end
faves
mesh(x,t,faves)
xlabel('distance')
ylabel('time')
```