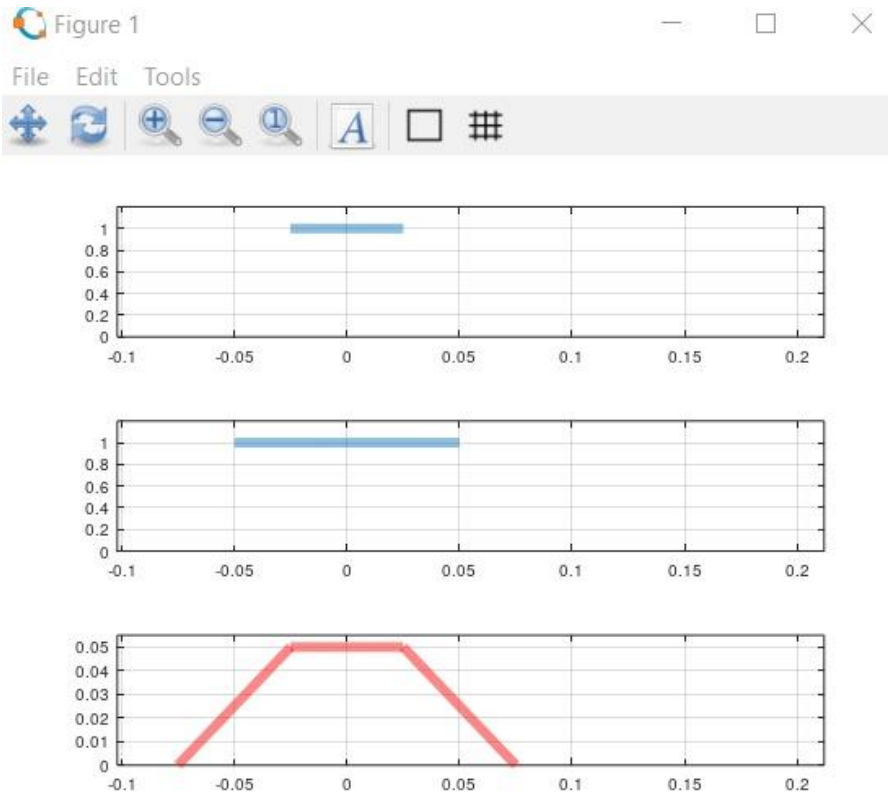
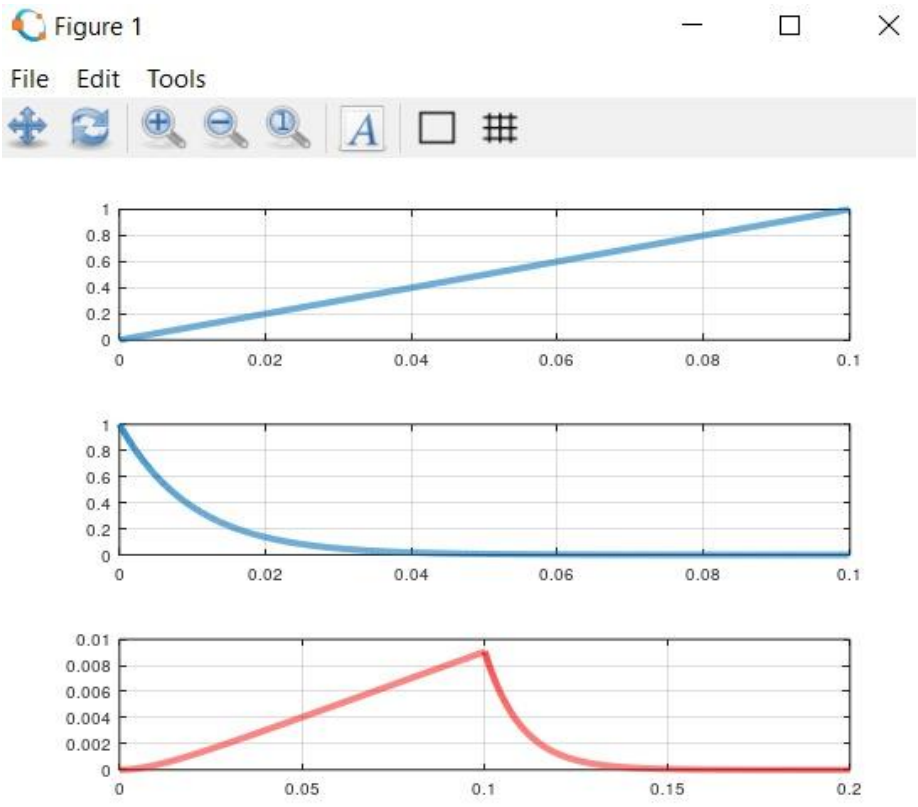
```
%EX1
clc;
clear all;
close all;

tstart=0;
tstop=0.1;
tpas=0.0001;

tx=-0.025:tpas:0.025;
t=0-tstop/2:tpas:tstop/2;
x=ones(1, 501);

subplot(3, 1, 1);
plot(tx, x, 'linewidth', 3);
axis([-0.102 0.212 0 1.2]); grid;

h=ones(1, 1001);
subplot(3, 1, 2);
plot(t, h, 'linewidth', 3);
axis([-0.102 0.212 0 1.2]); grid;


y=conv(x, h)*tpas;
tstopconv=(length(y)-1)*tpas;
t2=-tstopconv/2:tpas:tstopconv/2;

subplot(3, 1, 3);
plot(t2, y, 'r', 'linewidth', 3);
axis([-0.102 0.212 0 max(y)+max(y)/10]); grid;

```



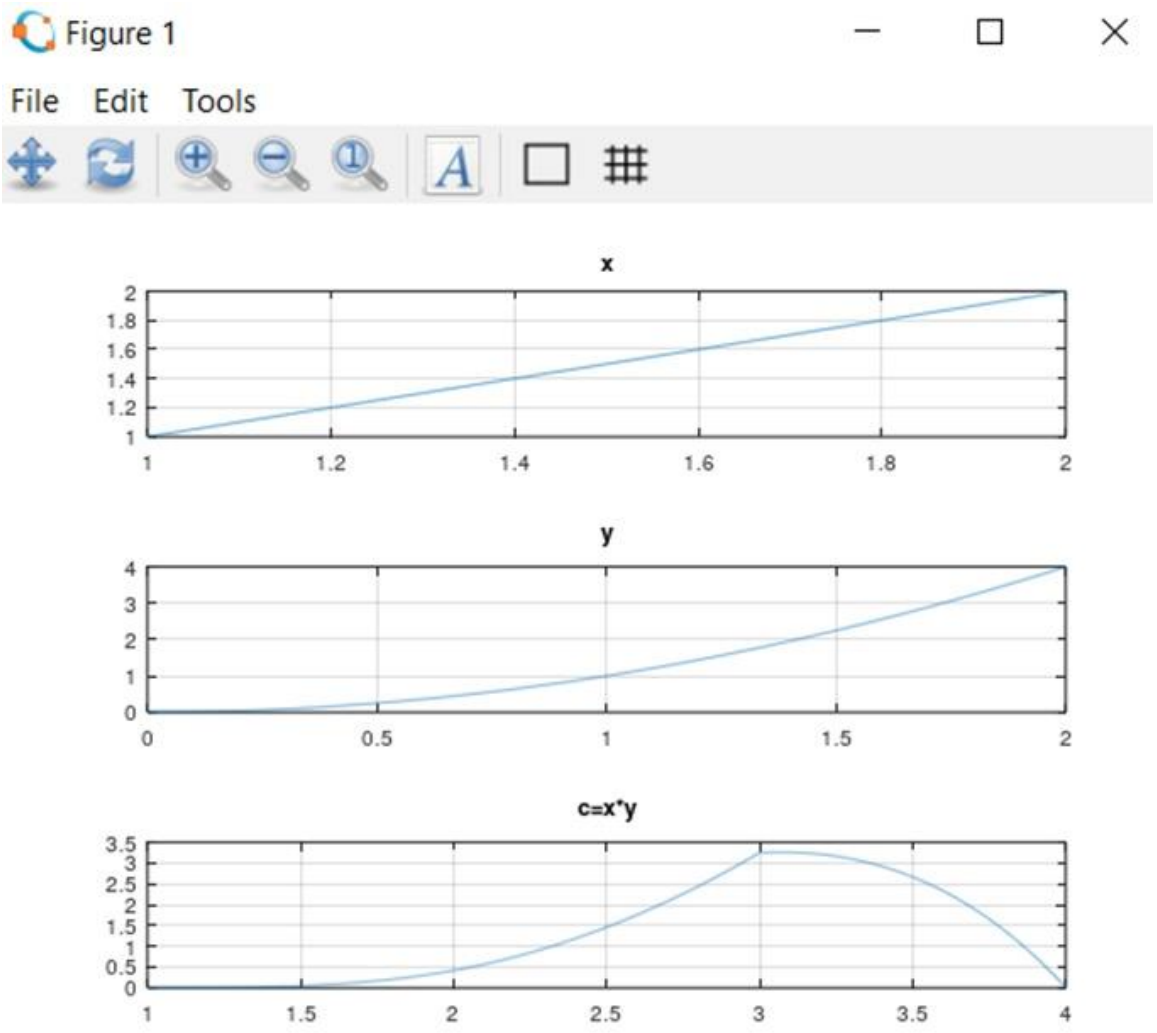
Exercițiul 2

```
clc;
clear all;
close all;

tstart=0;
tstop=0.1;
tpas=0.0001;
f=100;

t=tstart:tpas:tstop;
x=10*t;

subplot(3, 1, 1);
plot(t, x, 'linewidth', 2);
axis([0 0.1001 0 1]); grid;
h=1*exp(-f*t);
subplot(3, 1, 2);
plot(t, h, 'linewidth', 2);
axis([0 0.1001 0 1]); grid;

t2=2*tstart:tpas:2*tstop;
y=conv(x, h)*tpas;

subplot(3, 1, 3);
plot(t2, y, 'r', 'linewidth', 2);
axis(); grid;
%% Semnalul rampa crescatoare este simetrizat fata de Oy si
%impins peste celalalt semnal pana se depaseste
%% punctul de suprapunere maxima(in 0.1), cand graficul
%convolutiei incepe sa scada.
%%Valoarea de la linia 23 se inmuleste cu tpas pentru a
%reduce numarul de esantioane pe care se reprezinta
%%semnalul pe axa Oy, [0, 0.04], y reprezentand convolutia
%semnalelor x si h in functie de timp
```



Exercițiul 3

```
%EX3
tpas = 0.001;
t = 0 : tpas : 2;

x = t(end/2:end);
y = t.^2;

t2 = 1 : tpas : 4;
c = conv(x, y) * tpas;

subplot(3, 1, 1);
plot(t(end/2:end), x);
grid;
title('x');

subplot(3, 1, 2);
plot(t, y);
grid;
title('y');

subplot(3, 1, 3);
plot(t2, c);
grid;
title('c=x*y');
```



Exercițiul 5

```
clc;
clear all;
close all;

tstart = 0;
tstop = 0.1;
tpas = 0.0001;
f=50

t = tstart : tpas : tstop;
x = 1+10*t;
subplot(3, 1, 1);
plot(t, x, 'linewidth', 3);
axis([0 0.1001 1 2]); grid;

h = 1*exp(-f*t);
subplot(3, 1, 2);
plot(t, h, 'linewidth', 3);
axis([0 0.1001 0 1]); grid;

t2 = 2*tstart : tpas : tstop*2;
y = conv(h, x) *tpas;

subplot(3, 1, 3);
plot(t2, y, 'r', 'linewidth', 3);
axis(); grid;
```