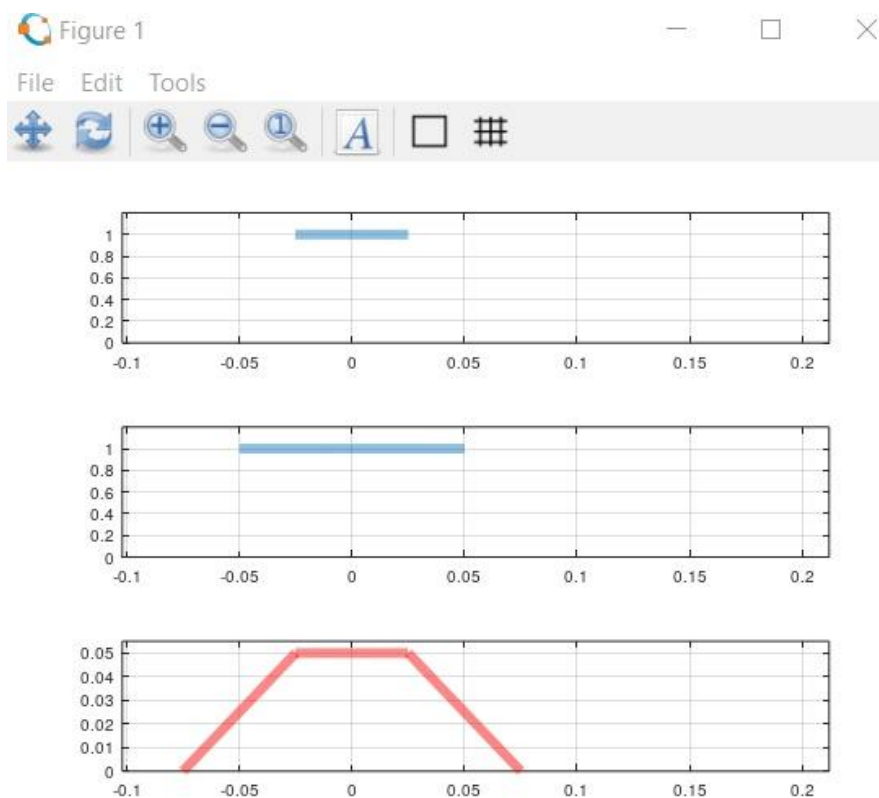


```

1 %EX1
2 clc;
3 clear all;
4 close all;
5
6 tstart=0;
7 tstop=0.1;
8 tpas=0.0001;
9
10 tx=-0.025:tpas:0.025;
11 t=0-tstop/2:tpas:tstop/2;
12 x=ones(1, 501);
13
14 subplot(3, 1, 1);
15 plot(tx, x, 'linewidth', 3);
16 axis([-0.102 0.212 0 1.2]); grid;
17
18 h=ones(1, 1001);
19 subplot(3, 1, 2);
20 plot(t, h, 'linewidth', 3);
21 axis([-0.102 0.212 0 1.2]); grid;
22
23
24 y=conv(x, h)*tpas;
25 tstopconv=(length(y)-1)*tpas;
26 t2=-tstopconv/2:tpas:tstopconv/2;
27
28 subplot(3, 1, 3);
29 plot(t2, y, 'r', 'linewidth', 3);
30 axis([-0.102 0.212 0 max(y)+max(y)/10]); grid;
31

```

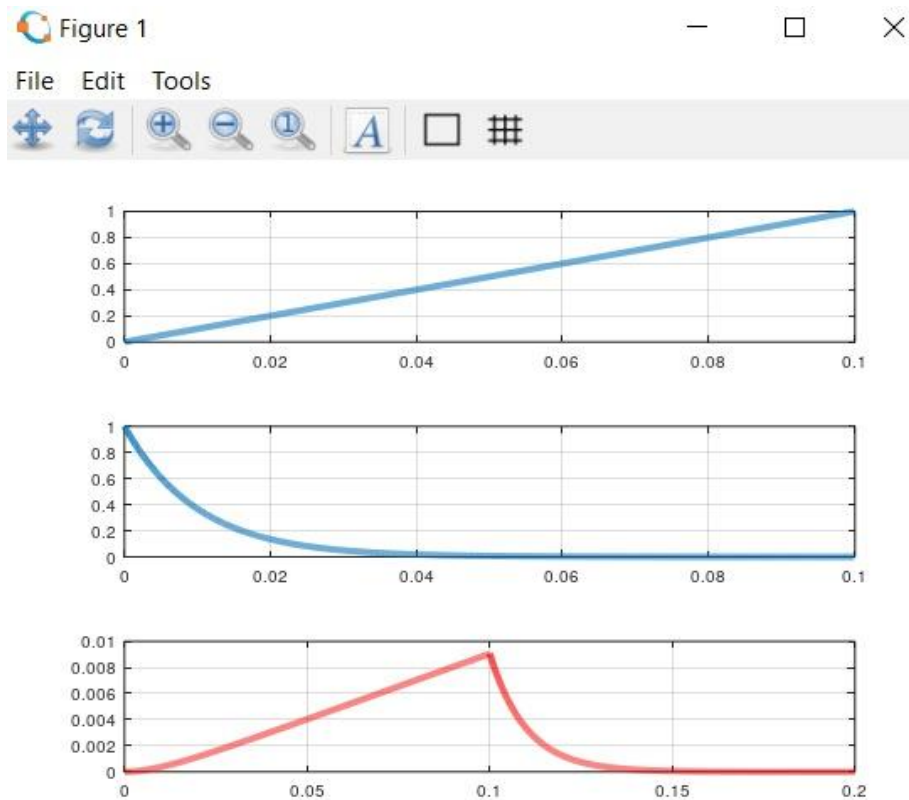


Exercițiul 2

```

35 clc;
36 clear all;
37 close all;
38
39 tstart=0;
40 tstop=0.1;
41 tpas=0.0001;
42 f=100;
43
44 t=tstart:tpas:tstop;
45 x=10*t;
46
47 subplot(3, 1, 1);
48 plot(t, x, 'linewidth', 2);
49 axis([0 0.1001 0 1]); grid;
50 h=1*exp(-f*t);
51 subplot(3, 1, 2);
52 plot(t, h, 'linewidth', 2);
53 axis([0 0.1001 0 1]); grid;
54
55 t2=2*tstart:tpas:2*tstop;
56 y=conv(x, h)*tpas;
57
58 subplot(3, 1, 3);
59 plot(t2, y, 'r', 'linewidth', 2);
60 axis(); grid;
61 %% Semnalul rampa crescatoare este simetrizat fata de Oy si
62 %% impins peste celalalt semnal pana se depaseste
63 %% punctul de suprapunere maxima (in 0.1), cand graficul
64 %% convolutiei incepe sa scada.
65 %% Valoarea de la linia 23 se inmulteste cu tpas pentru a
66 %% reduce numarul de esantioane pe care se reprezinta
67 %% semnalul pe axa Oy, [0, 0.04], y reprezentand convolutia
68 %% 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;

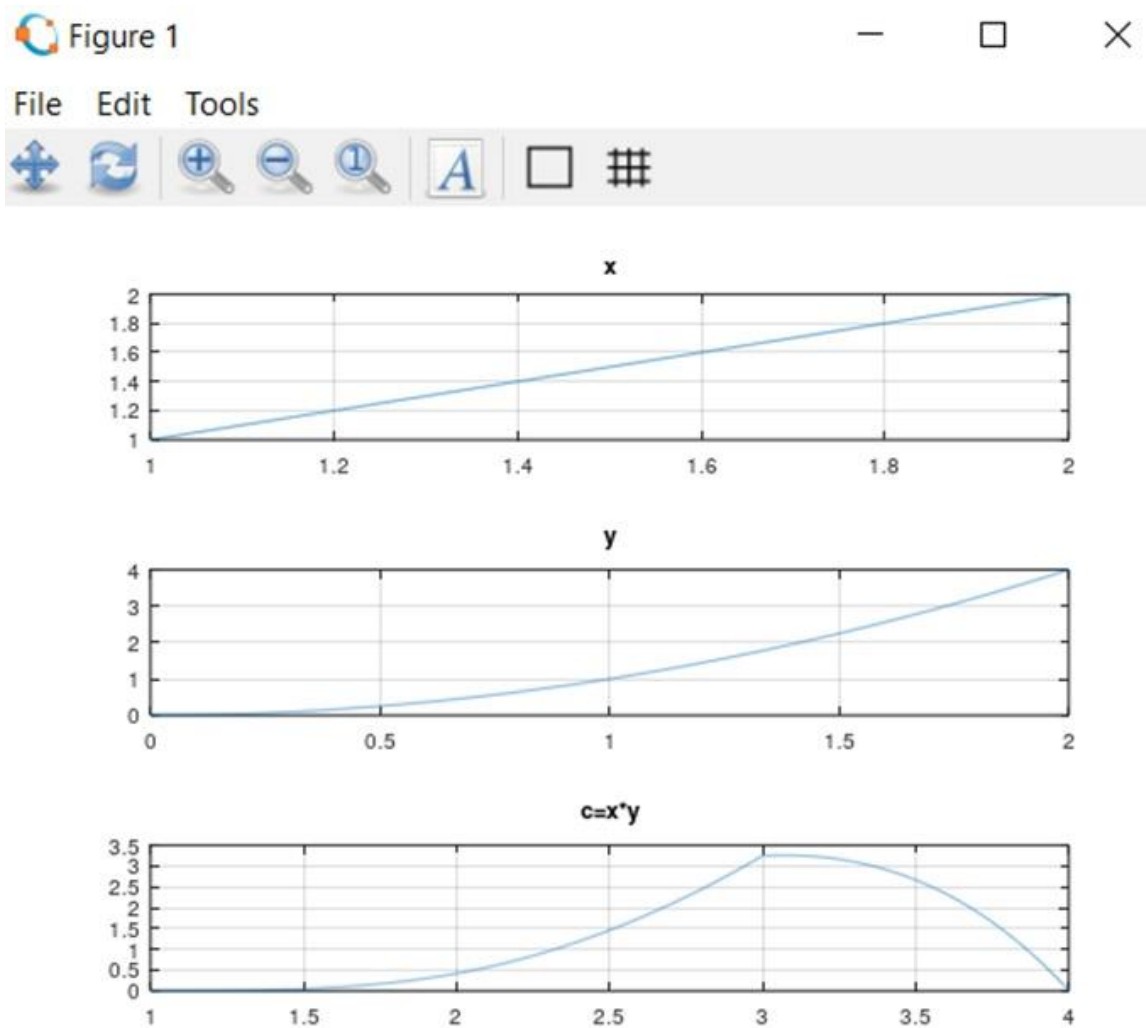
t2 = 1 : tpas : 4;
c = conv(x, y) * tpas;

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');

```



```

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;

```

Figure 1

