

Tema

1.

```
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;
```

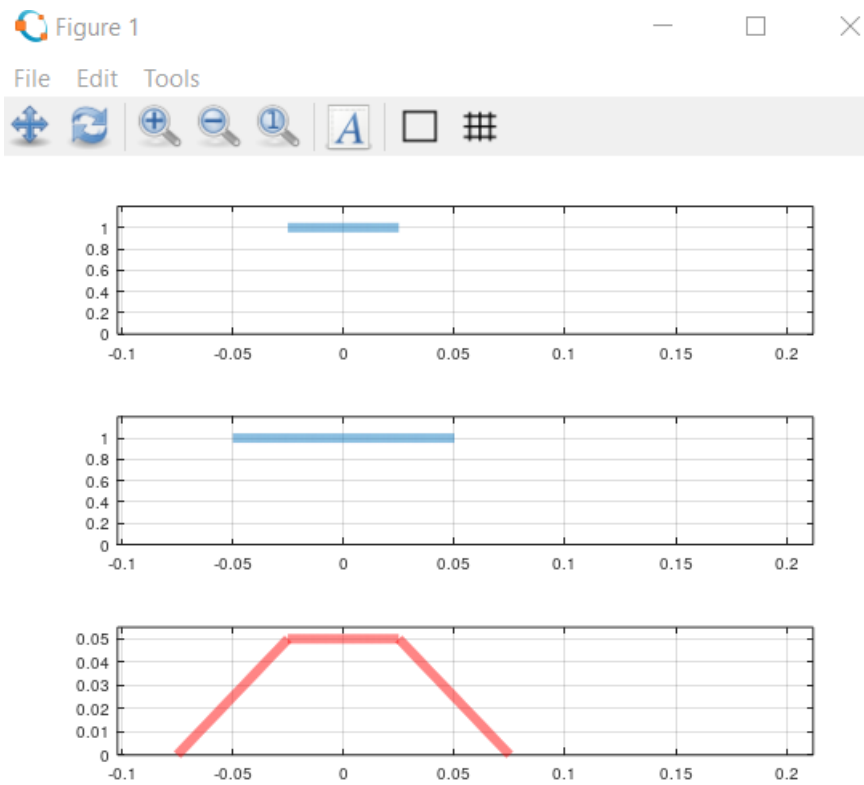
```
tstopconv=(length(y)-1)*tpas;
```

```
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;
```



```
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);
```

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```
axis([0 0.1001 0 1]); grid;
```

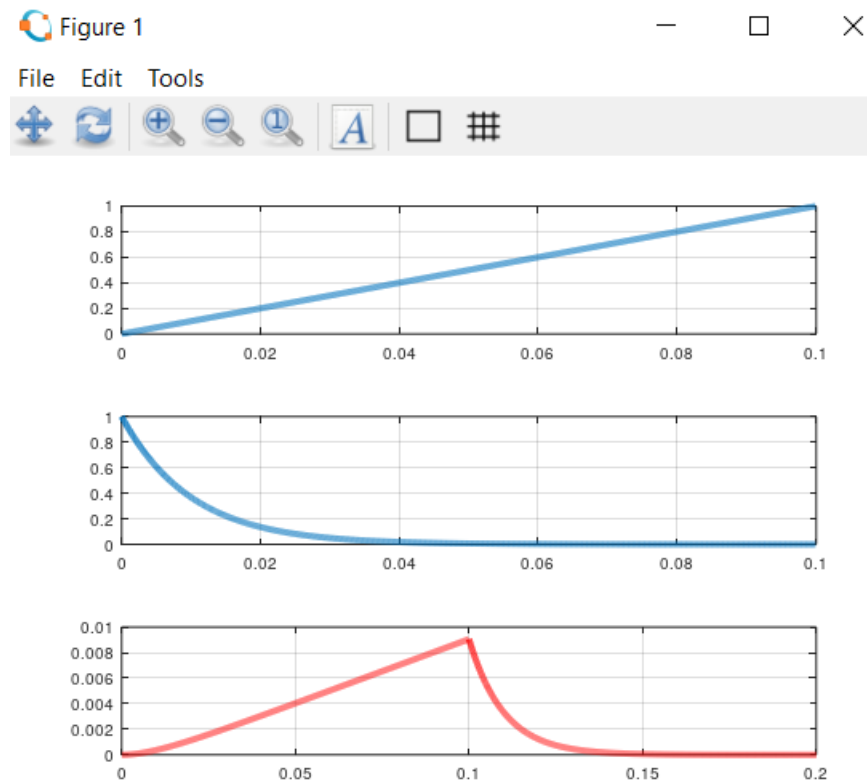
```
t2=2*tstart:tpas:2*tstop;
```

```
y=conv(x, h)*tpas;
```

```
subplot(3, 1, 3);
```

```
plot(t2, y, 'r', 'linewidth', 2);
```

```
axis(); grid;
```



```
3. clc;
```

```
clear all;
```

```
close all;
```

```
pkg load signal;
```

```
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);
```

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```
grid;
```

```
title('x');
```

```
subplot(3, 1, 2);
```

```
plot(t, y);
```

```
grid;
```

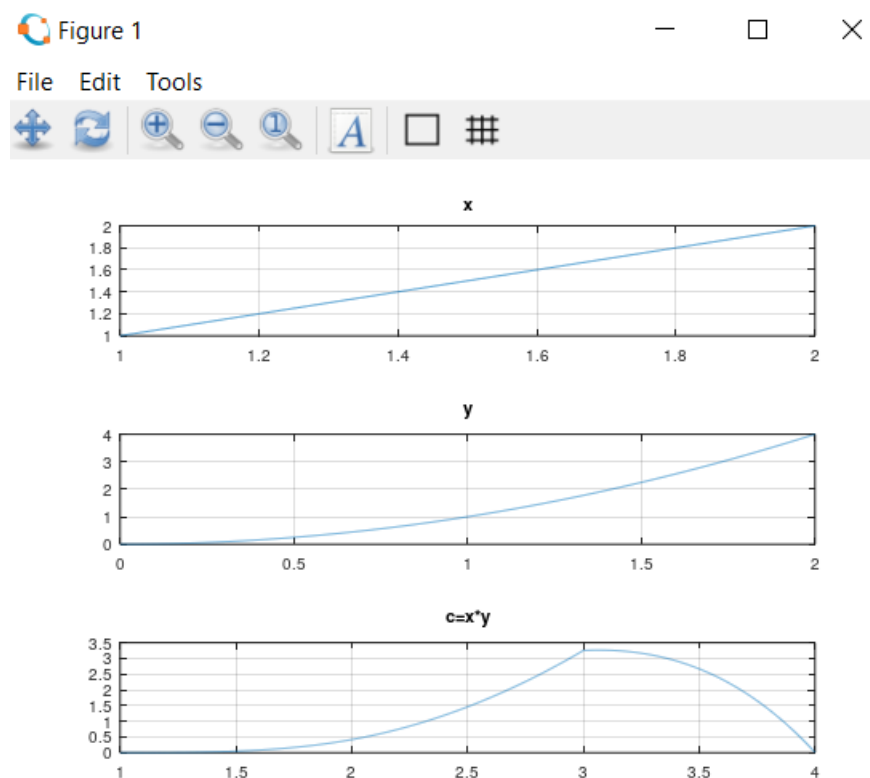
```
title('y');
```

```
subplot(3, 1, 3);
```

```
plot(t2, c);
```

```
grid;
```

```
title('c=x*y');
```



```
5. clc;
```

```
clear all;
```

```
close all;
```

```
tstart = 0;
```

```
tstop = 0.1;
```

```
tpas = 0.0001;
```

f=50 %pentru o variatie exponentiala mai lina trebuie micsorata valoarea lui f

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```
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;
```

