Laboratorium 8

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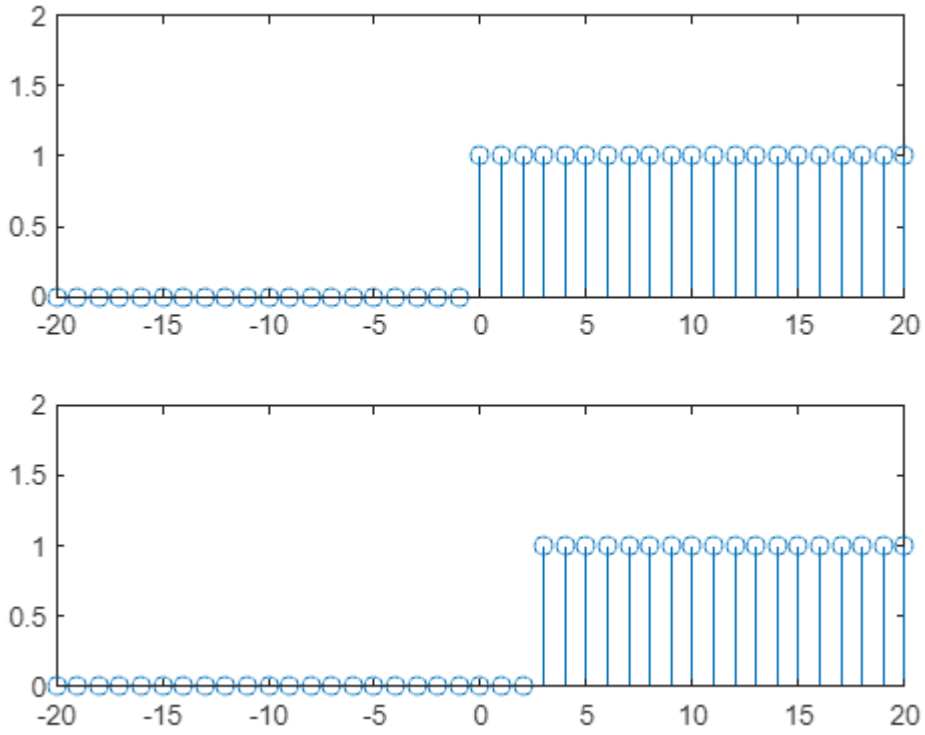
Zadanie 2

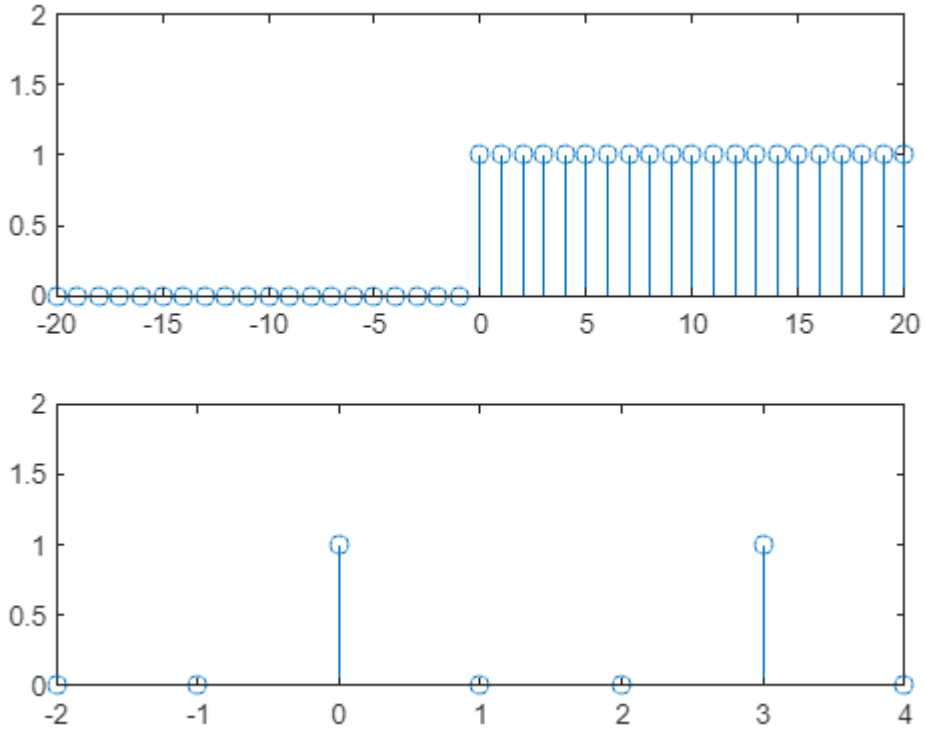
```
clear all;
n=-20:20;
zero = 1-n(1);

x1=zeros(1,length(n));
x1(zero:end)=ones(1);
subplot(2,1,1), stem(n,x1), axis([-20 20 0 2])

k = zero + 3;
x2 = zeros(1,length(n));
x2(k:end)=ones(1);
subplot(2,1,2), stem(n,x2), axis([-20 20 0 2])
```



Zadanie 3

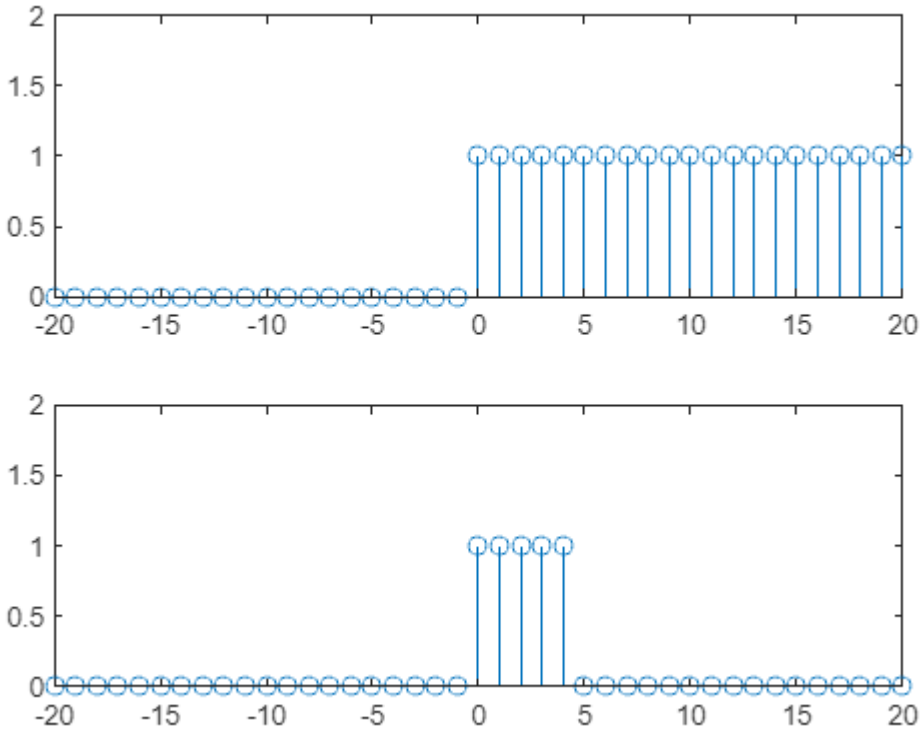
```
clear all;
n=-2:4;
x0 = 1-n(1);
y=zeros(1,length(n));
```

```
y(x0)=ones(1);

xk = x0+3;
y(xk)=ones(1);

stem(n,y), axis([-2 4 0 2])
```



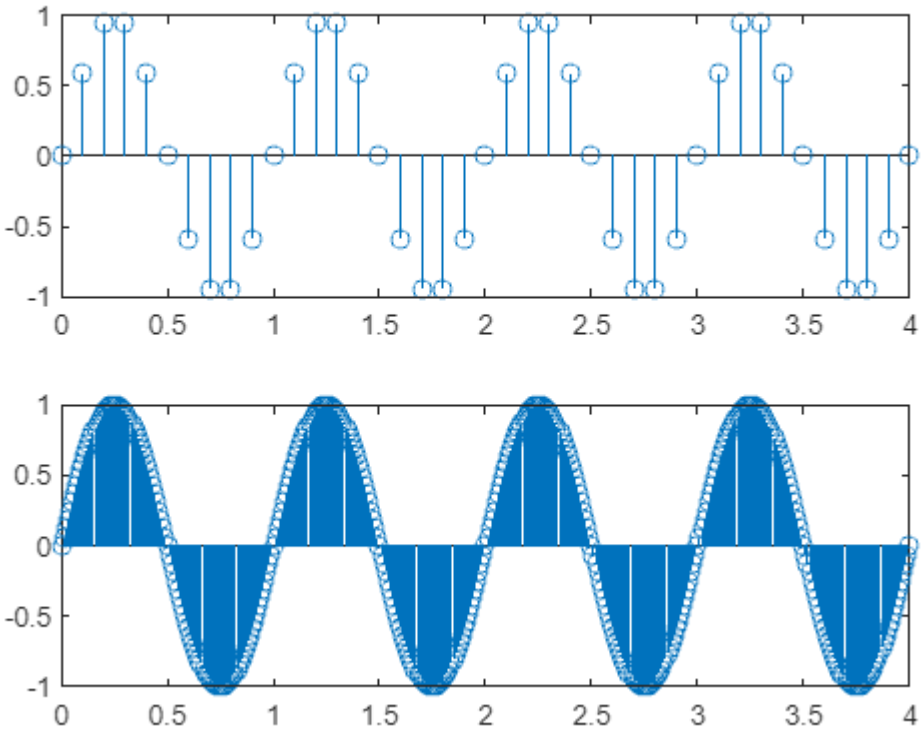
Zadanie 4

```
clear;
n=-20:20;
zero = 1-n(1);

x1=zeros(1,length(n));
x1(zero:end)=ones(1);
k = zero + 5;
x2 = zeros(1,length(n));
x2(k:end)=ones(1);

x = x1-x2;
stem(n,x), axis([-20 20 0 2])
```



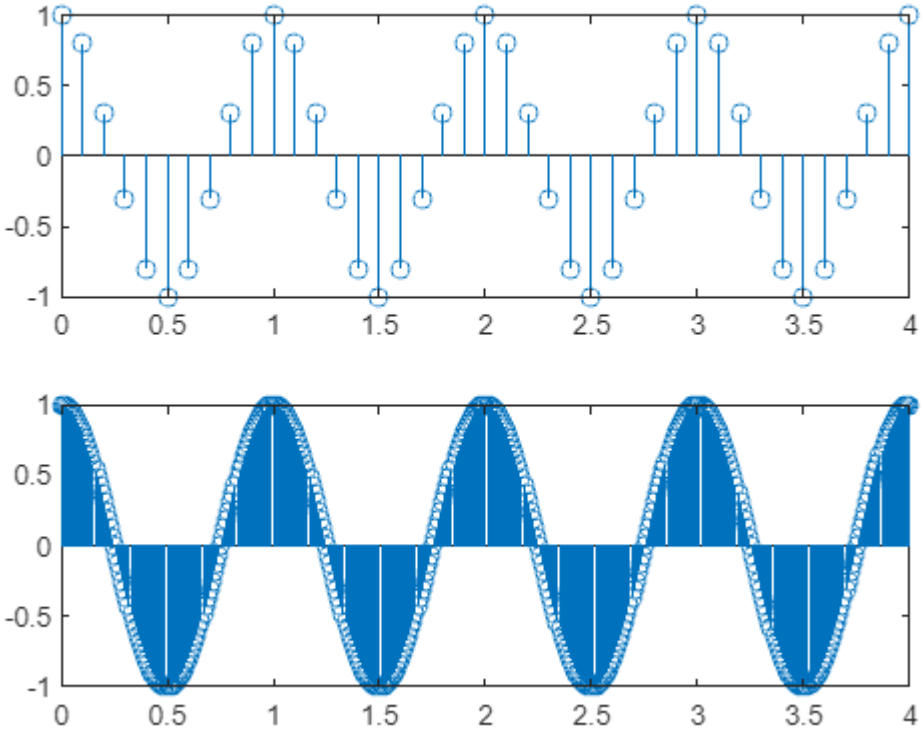
Zadanie 5

```
clear;
t1=0:0.1:4;
t2=0:0.01:4;
y1 = sin(2*pi*t1);
y2 = sin(2*pi*t2);
subplot(2,1,1), stem(t1, y1);
subplot(2,1,2), stem(t2, y2);
```



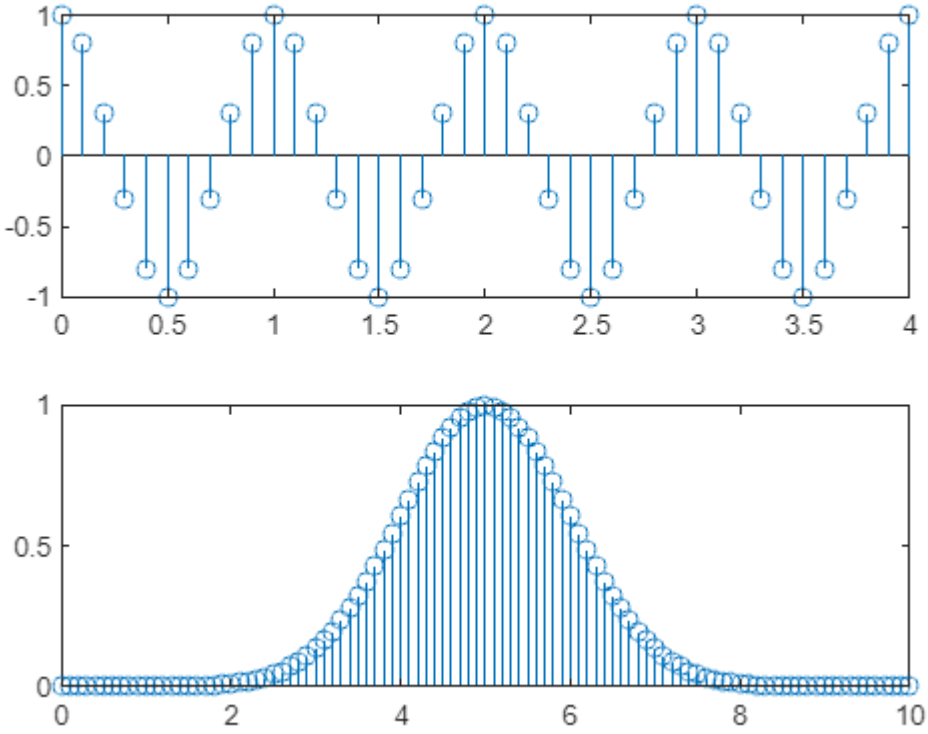
Zadanie 6

```
clear;
t1=0:0.1:4;
t2=0:0.01:4;
y1 = cos(2*pi*t1);
y2 = cos(2*pi*t2);
subplot(2,1,1), stem(t1, y1);
subplot(2,1,2), stem(t2, y2);
```



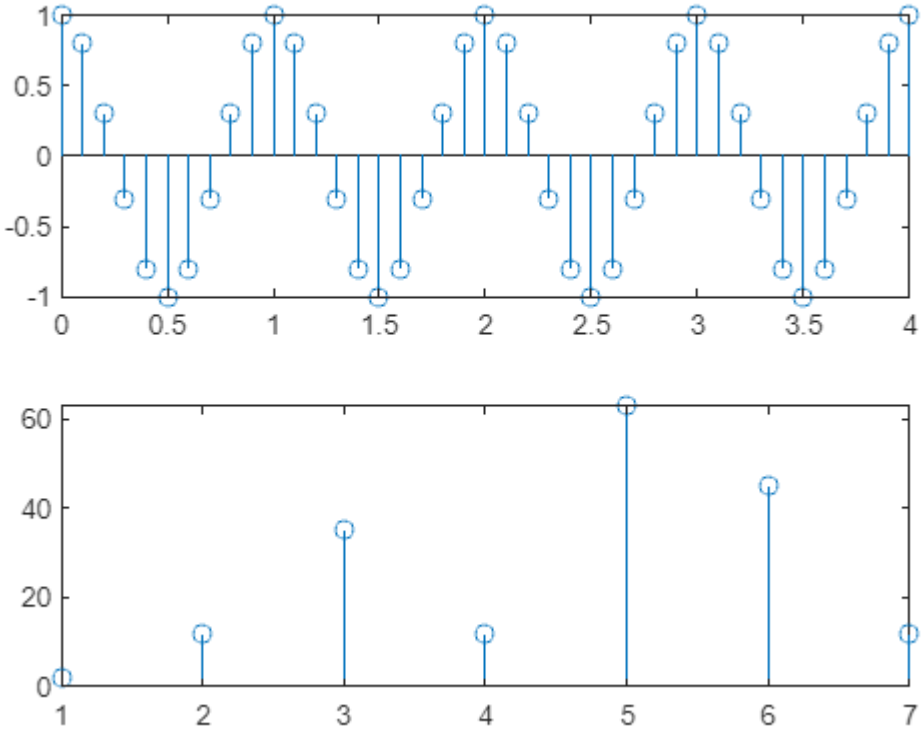
Zadanie 7

```
clear;
t = 0:0.1:10;
sigma = 1;
c = 5;
y = gaussmf(t, [sigma, c]);
stem(t,y);
```



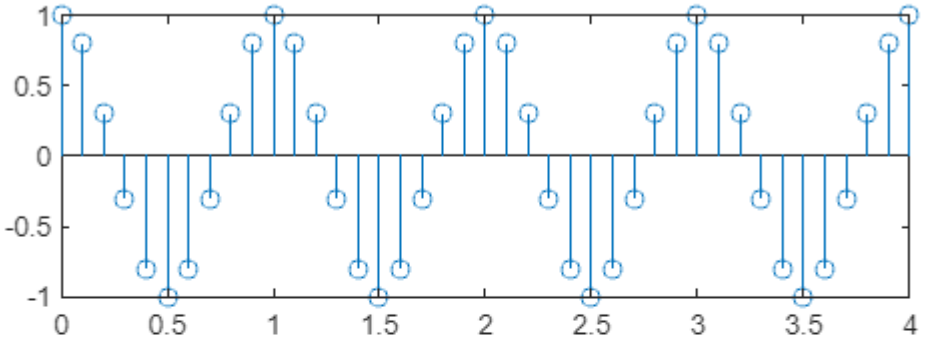
Zadanie 8

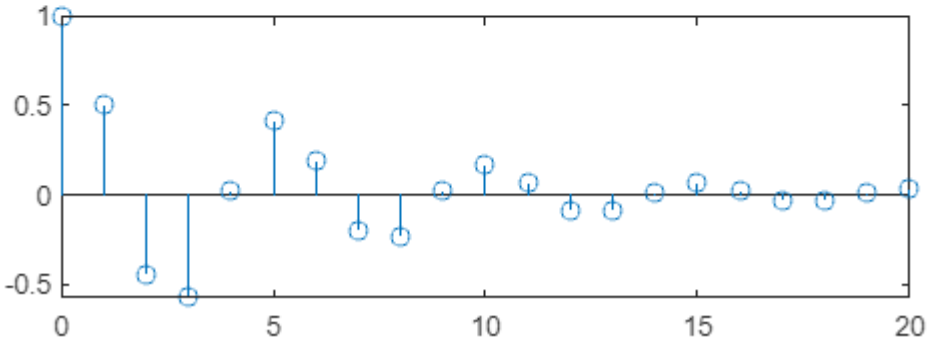
```
clear;
y1 = [1 3 5 6 7 9 2];
y2 = [2 4 7 2 9 5 6];
y3 = y1.*y2;
stem(y3);
```



Zadanie 9

```
clear;
n=0:20;
x=[1,zeros(1,20)];
a=[1];
b=[1 -0.5 0.7];
y=filter(a,b,x);
stem(n,y);
```


1
0.5
0
-0.5
-1
0
0.5
1
1.5
2
2.5
3
3.5
4


1
0.5
0
-0.5
0
5
10
15
20