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Zadanie 1.1

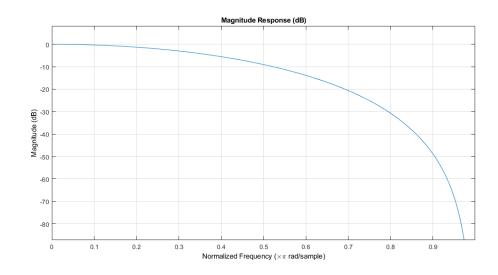
1.0000

0.8995

```
[b,a] = maxflat(4,1,0.3)
fvtool(b,a)

b =
     0.1187     0.4749     0.7123     0.4749     0.1187

a =
```



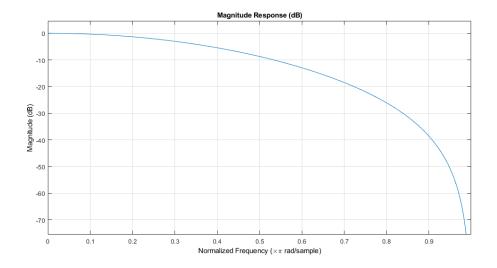
Zadanie 1.2

```
[b,a] = maxflat(4,'sym',0.3)
```

```
fvtool(b,a)

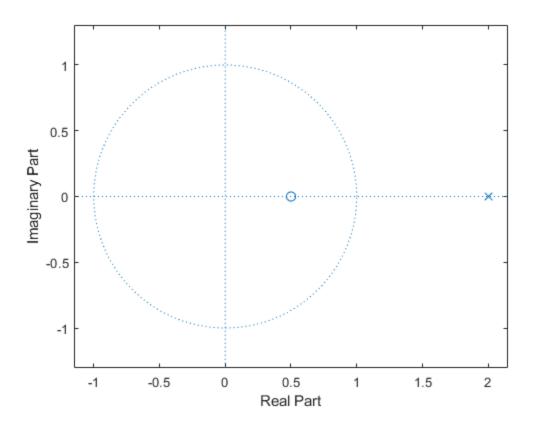
b =
     0.0331     0.2500     0.4337     0.2500     0.0331

a =
     1
```



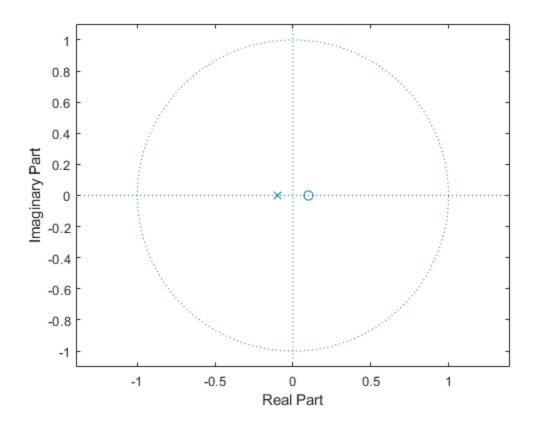
```
b = [1 -0.5]; a = [1 -2];
act_flag1 = isstable(b,a)
zplane(b,a)

act_flag1 =
  logical
  0
```



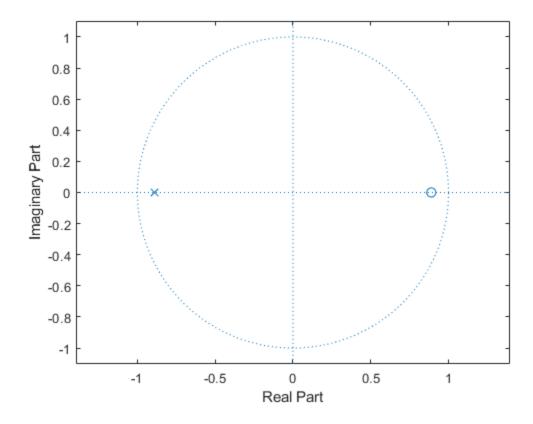
```
b = [1 -0.1]; a = [-1 -0.1];
act_flag1 = isstable(b,a)
zplane(b,a)

act_flag1 =
  logical
  1
```



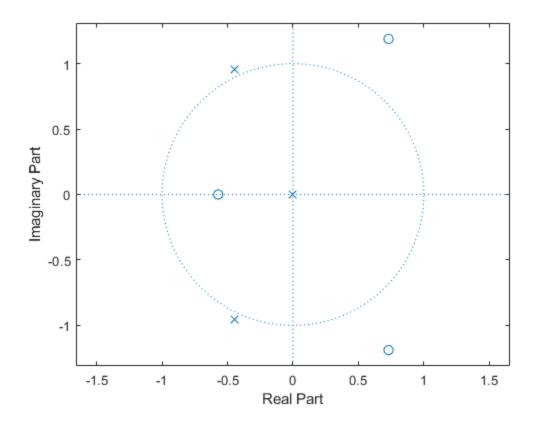
```
b = [0.9 -0.8]; a = [-0.9 -0.8];
act_flag1 = isstable(b,a)
zplane(b,a)

act_flag1 =
  logical
  1
```



```
b = [0.9 -0.8 1 1]; a = [-0.9 -0.8 -1];
act_flag1 = isstable(b,a)
zplane(b,a)

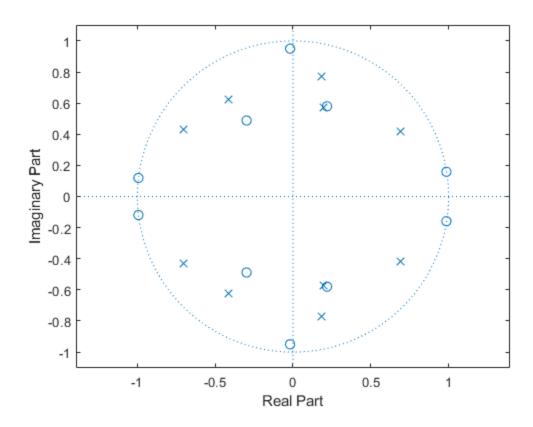
act_flag1 =
  logical
  0
```



```
m = [0  0  1  1  1  0  1  1  0  0];
f = [0  0.1  0.2  0.3  0.4  0.5  0.7  0.8  0.9  1];
[b,a] = yulewalk(10,f,m);

act_flag1 = isstable(b,a)
zplane(b,a)

act_flag1 =
  logical
  1
```



```
[b,a] = maxflat(4,1,0.3);

% act_flag1 = isstable(b,a)
% zplane(b,a)

% wynik flag = 0

load chirp
t = (0:length(y)-1)/Fs;
% 1.6 sekundy
xfft=abs(fft(y));
xfft=xfft/13129;

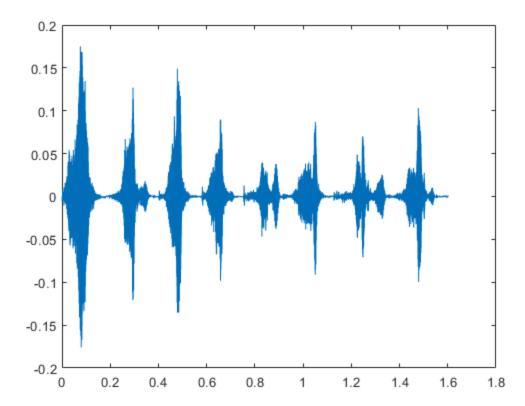
x1=1:1:6564;
% bar(x1(1:6564), xfft(1:6564));
% axis([0,6564, 0,0.01]);
% plot(t,y);
% fvtool(b,a)

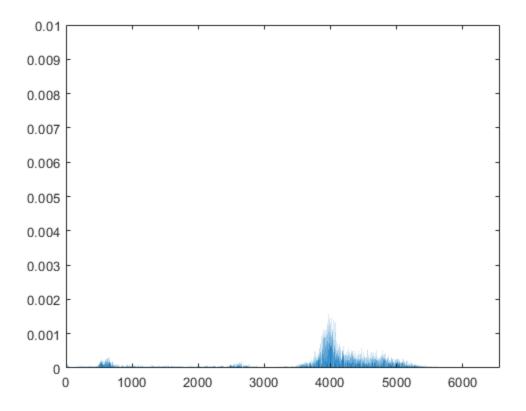
outsignal = filter(b,a,y);
```

```
figure()
plot(t, outsignal);

xfft=abs(fft(outsignal));
xfft=xfft/13129;
x1=1:1:6564;

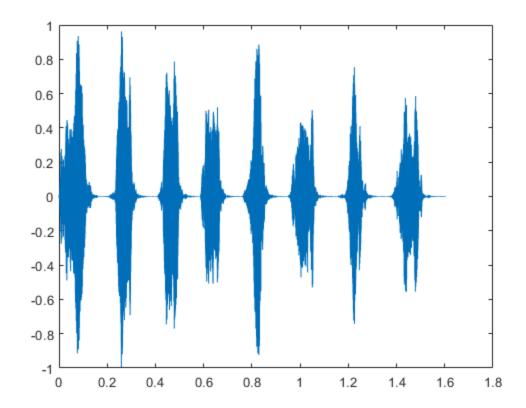
figure()
bar(x1(1:6564), xfft(1:6564));
axis([0,6564, 0,0.01]);
```

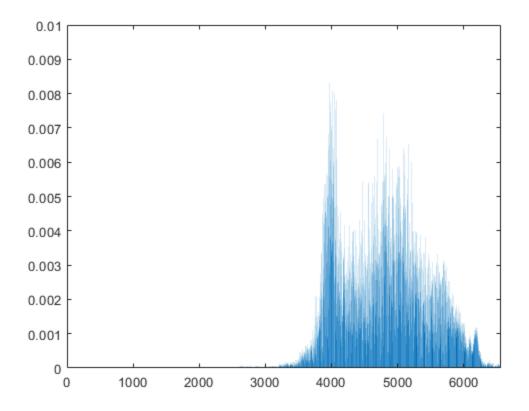




```
m = [0 \ 0 \ 0 \ 0 \ 1 \ 1 \ 1 \ 1];
f = [0 \ 0.1 \ 0.2 \ 0.3 \ 0.4 \ 0.5 \ 0.7 \ 0.8 \ 0.9 \ 1];
[b,a] = yulewalk(10,f,m);
% act_flag1 = isstable(b,a)
% zplane(b,a)
% wynik flag = 0
load chirp
t = (0:length(y)-1)/Fs;
% 1.6 sekundy
xfft=abs(fft(y));
xfft=xfft/13129;
x1=1:1:6564;
% bar(x1(1:6564), xfft(1:6564));
% axis([0,6564, 0,0.01]);
% plot(t,y);
% fvtool(b,a)
```

```
outsignal = filter(b,a,y);
figure()
plot(t, outsignal);
xfft=abs(fft(outsignal));
xfft=xfft/13129;
x1=1:1:6564;
figure()
bar(x1(1:6564), xfft(1:6564));
axis([0,6564, 0,0.01]);
```





zad9

```
b = [0.9 -0.8 1 1]; a = [-0.9 -0.8 -1];
% niestabilny

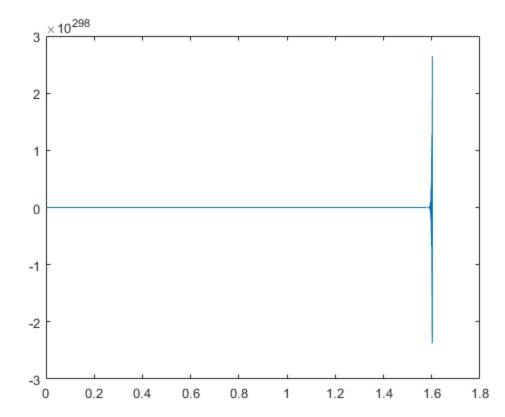
% act_flag1 = isstable(b,a)
% zplane(b,a)

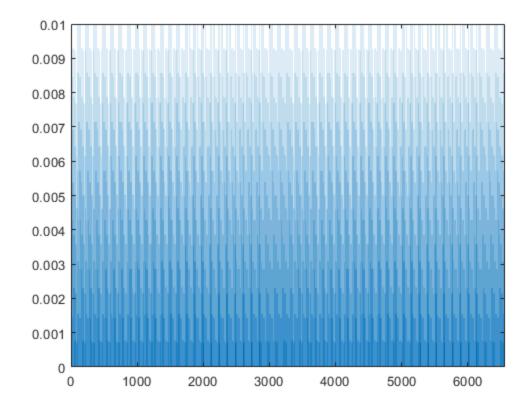
% wynik flag = 0

load chirp
t = (0:length(y)-1)/Fs;
% 1.6 sekundy
xfft=abs(fft(y));
xfft=xfft/13129;

x1=1:1:6564;
% bar(x1(1:6564), xfft(1:6564));
% axis([0,6564, 0,0.01]);
% plot(t,y);
% fvtool(b,a)
```

```
outsignal = filter(b,a,y);
figure()
plot(t, outsignal);
xfft=abs(fft(outsignal));
xfft=xfft/13129;
x1=1:1:6564;
figure()
bar(x1(1:6564), xfft(1:6564));
axis([0,6564, 0,0.01]);
```





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