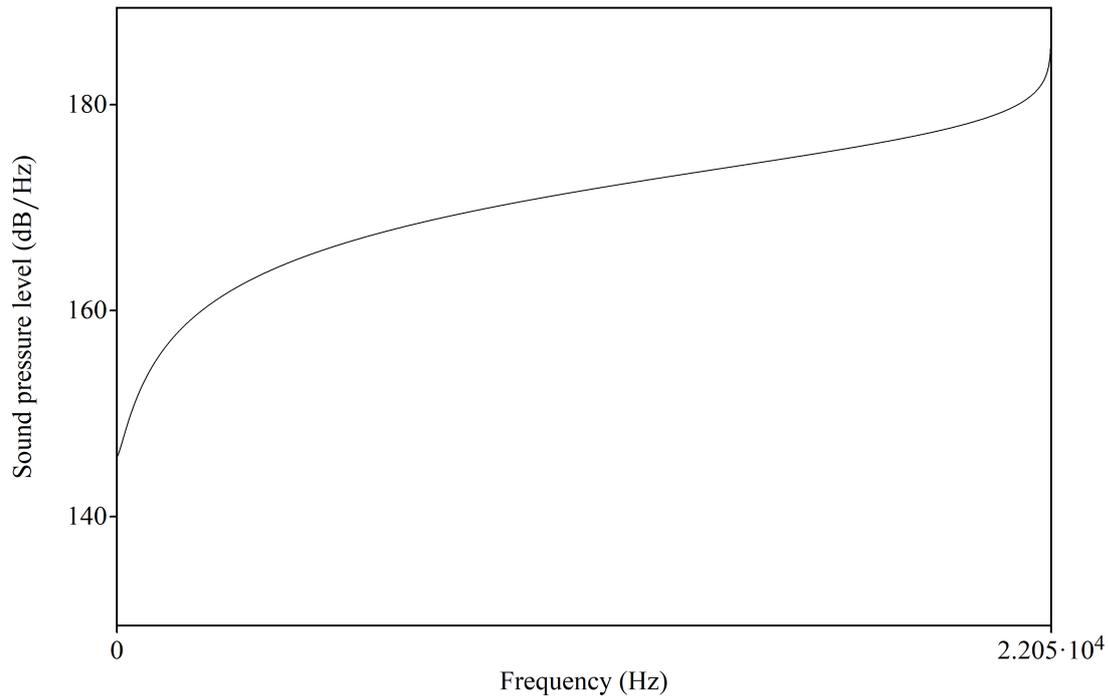Homework 6

Filtering

R.A.J. Wacanno (11741163)

6.1

This is a non-recursive filter.

6.2

```
form Set FF Bw and SF
    positive Formant_frequency 100
    positive Bandwidth 10
    positive Sampling_frequency 44100
endform

f1 = formant_frequency
b1 = bandwidth
dT = 1 / sampling_frequency

r = exp (-pi * b1 * dT)
c = - r^2
b = 2 * r * cos (2 * pi * f1 * dT)

appendInfoLine: "b: ", b, ", c: ", c
```
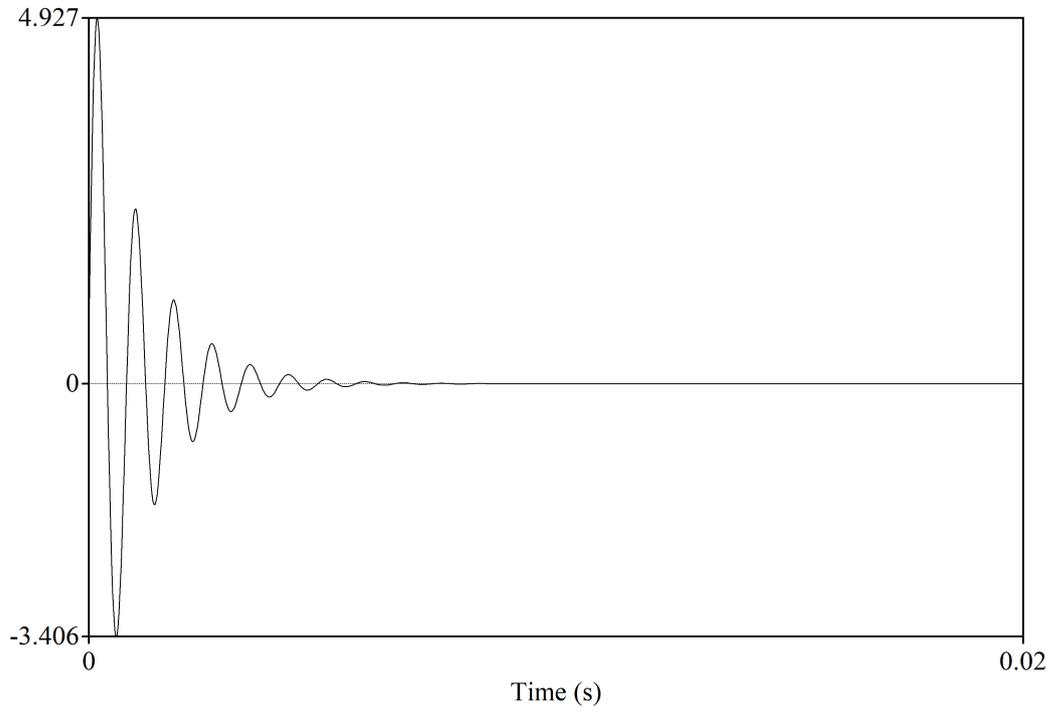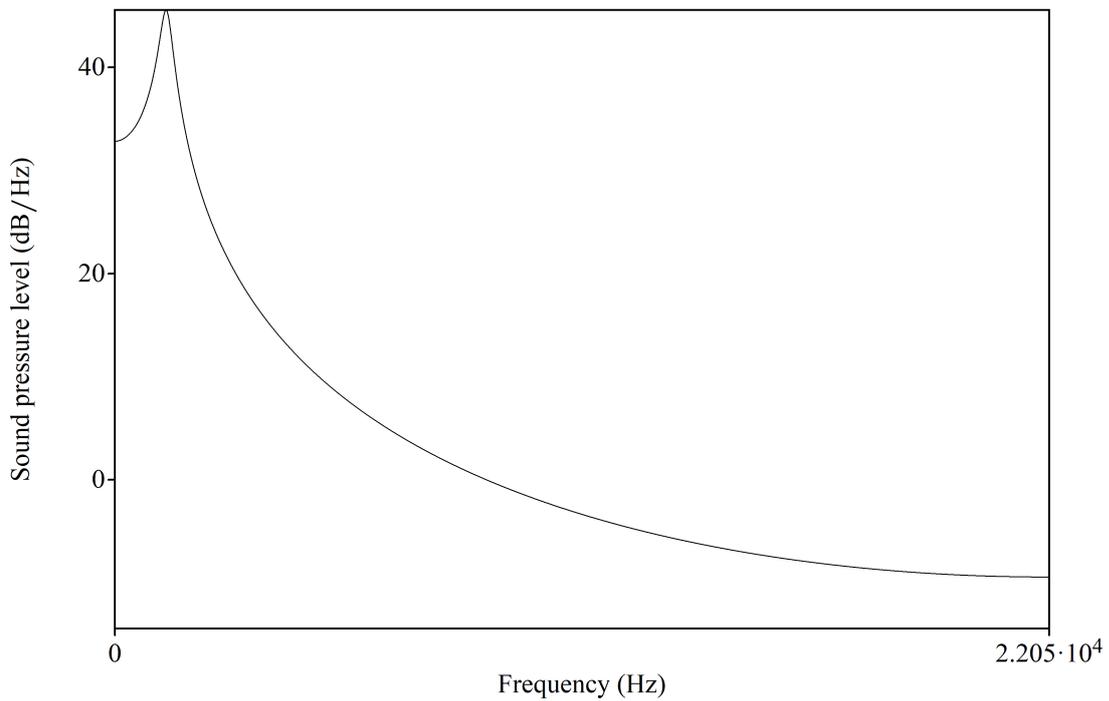
6.3

$b = 1.93, c = -0.96$

6.4
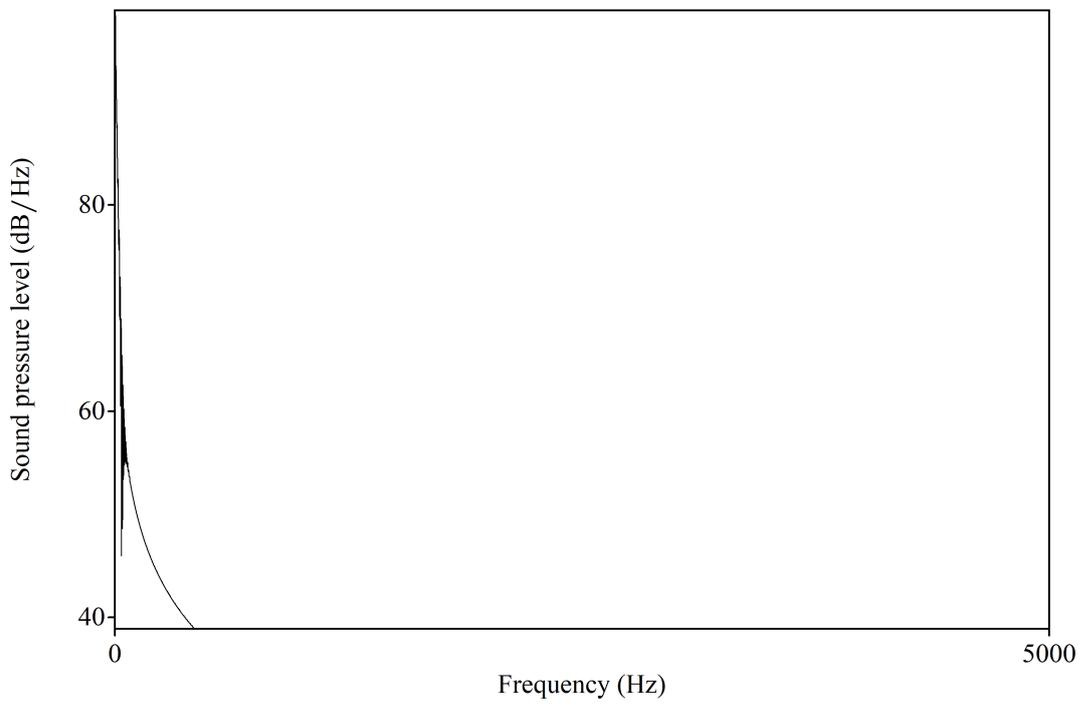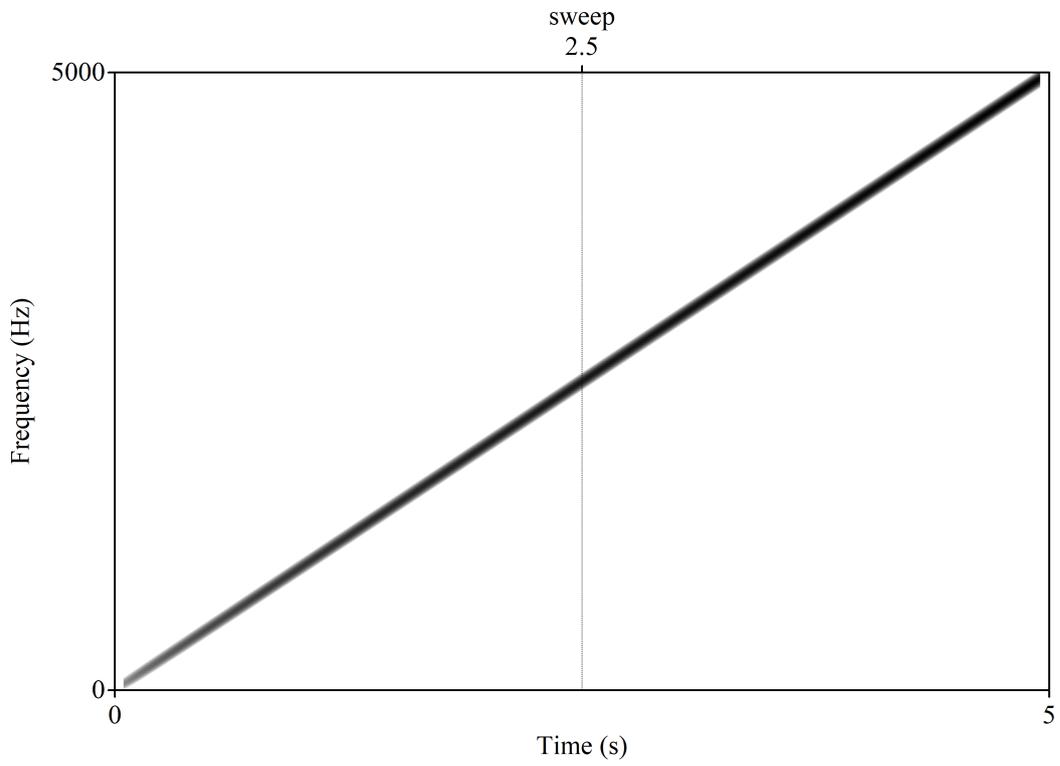
Figure 1: With *b* and *c* from 6.3

a

b

c

6.5

6.6