3.1.a cos(psi(t)) = Re{e^(j\*psi(t))}

Psi(t) = 2\*pi\*mu\*tt.\*tt + 2\*pi\*fzero\*tt+phi

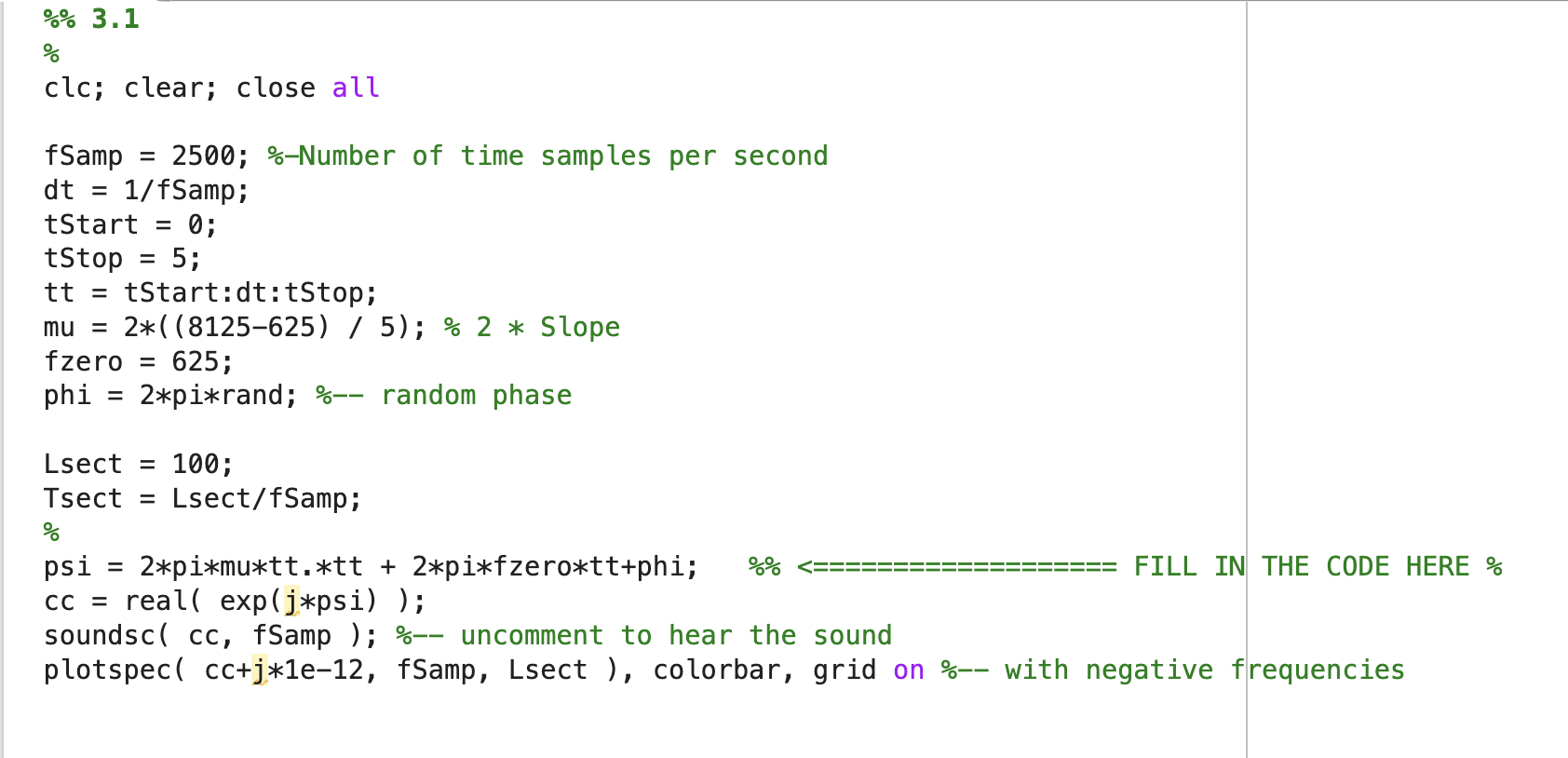
3.1.b L\_sect = 100

T\_sect = L\_sect/f\_Samp

3.1.c: We are trying to sample frequencies that are more than half of the sampling frequency. The reason for the ups and downs could be because the plotspec function is not having small enough sample sizes so the samples it does calculate “fold” over into the inner frequencies?

A screenshot of a graph

AI-generated content may be incorrect.



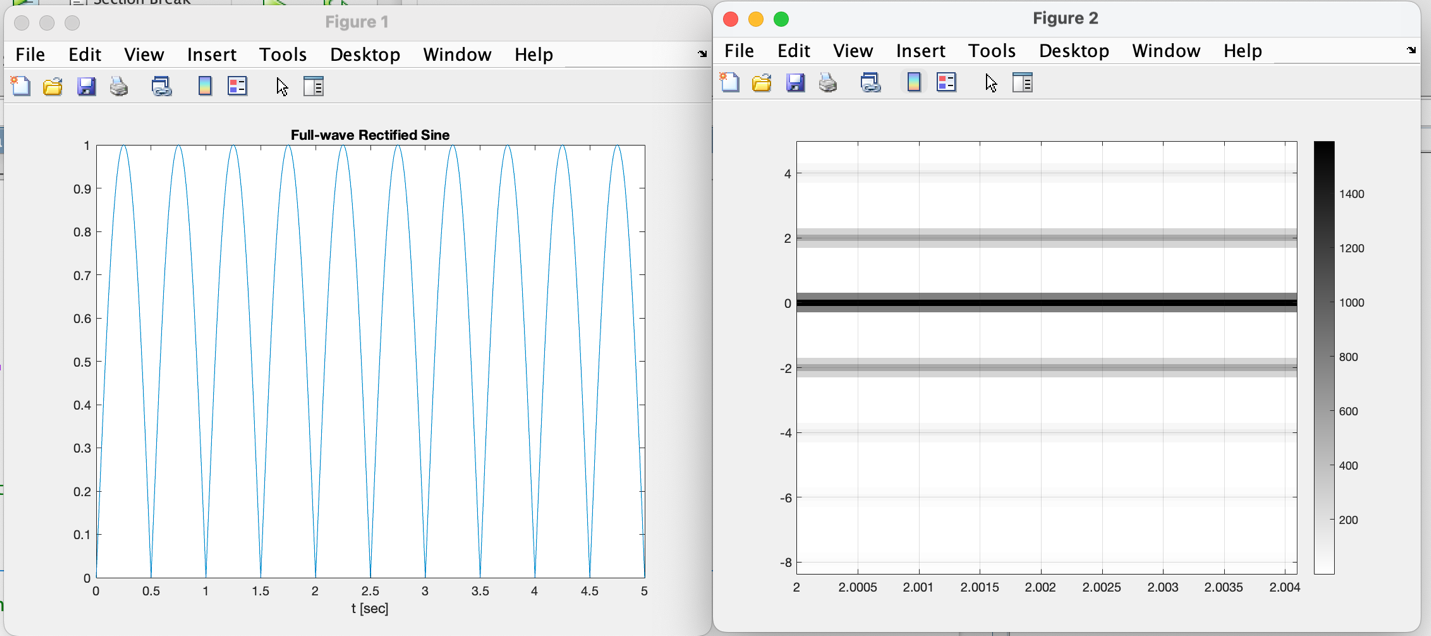
3.2.b

A close-up of symbols

AI-generated content may be incorrect.

3.2.d

0, 2, 4, 6 harmonics



3.2.e

Fundamental Frequency is 1Hz

3.2.f

A\_1 = .212 & a\_3 = .018

Db difference is -21.3389 dB

A screenshot of a computer

AI-generated content may be incorrect.

3.3.a

If B2 is 6dB bigger than B1, then this implied that it is approximately twice as big since log10(2) is around .3010 and that times 20 is 6.0206 ~ 6dB

3.3b

The db difference between a1 and a3 is -21.3389 meaning a1 is 21.3389 dB bigger than a3 or roughly that a1 is 11.67 times a3

3.4A screenshot of a computer

AI-generated content may be incorrect.

Db spectrum

Frequencies are infinite

Best Value of T\_sect is 5

A screenshot of a computer program

AI-generated content may be incorrect.

3.5

A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.