PROBLEM:

The following MATLAB program makes a plot of the *amplitude modulated* signal that is "cosine-times-sine." (Actually the plot is of a finite time segment of the signal.)

```
tt = -1:0.01:1;
xx = cos(33*pi*tt) .* sin(pi*tt);
plot(tt,xx)
```

(a) Make a *sketch* of the plot that will be done by MATLAB. Label the time axis carefully.
   Note: this can be done *without* running the MATLAB commands.

(b) The "spectrum" diagram gives the frequency content of a signal. Draw a sketch of the spectrum of the signal represented by xx. Label the frequencies and the complex amplitudes of each component.