

Extra Credit #3

1. Give, as completely as possible, a procedure for generating and measuring the following function.

$$V(t) = 350\text{mV} \sin(1000\pi t)$$

2. What frequencies make up the audio range?
3. Give a simple explanation for how a cathode ray tube oscilloscope permits us to display a voltage signal as a function of time.
4. Give, as completely as possible, a procedure for generating a Lissajous pattern that looks like an ellipse.
5. Write a mathematical expression for an exponentially decaying sinusoidal voltage as a function of time. Give, as completely as possible, a procedure for generating such a function.