

EE100 Lab Prelab: **Designing a Poor Man's Square Wave Signal Generator**

Name: _____

TA: _____

Section: _____

1. Draw the driving characteristic of a Zener diode with $2.5V V_Z$, and $0.7V V_F$ (input voltage / output current diagram).

2. Draw the transfer characteristic of the circuit shown in Figure 2 if $R1=2k$ and $R2=4k$ and the Zener diodes have $2.5V V_Z$ and $0V V_F$.

3. Assuming a $10V_{pp}$ sine wave voltage input, $2.5V V_Z$ and $0V V_F$ ideal Zener diodes, and ideal op-amp, with $R1=R2=2k$, what the expected output waveform will be?

