ELEN 50 Lab 4
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Friday 2:15-5:00p

Prelab:
Part 1: R_1 should be 1.25 kΩ.
Part 2: R_1 should be 1 kΩ.

Part A:

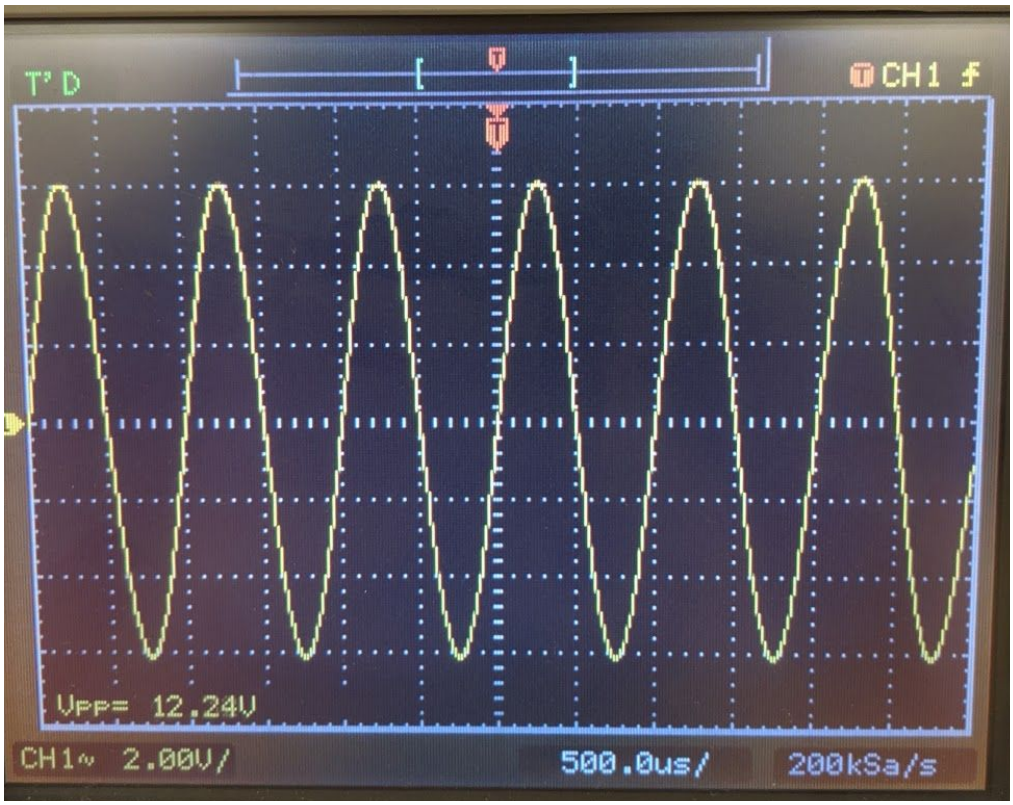
2) Output voltage = -12.4V

3) DC Voltage gain = $\frac{-12.4}{1} = -12.4$

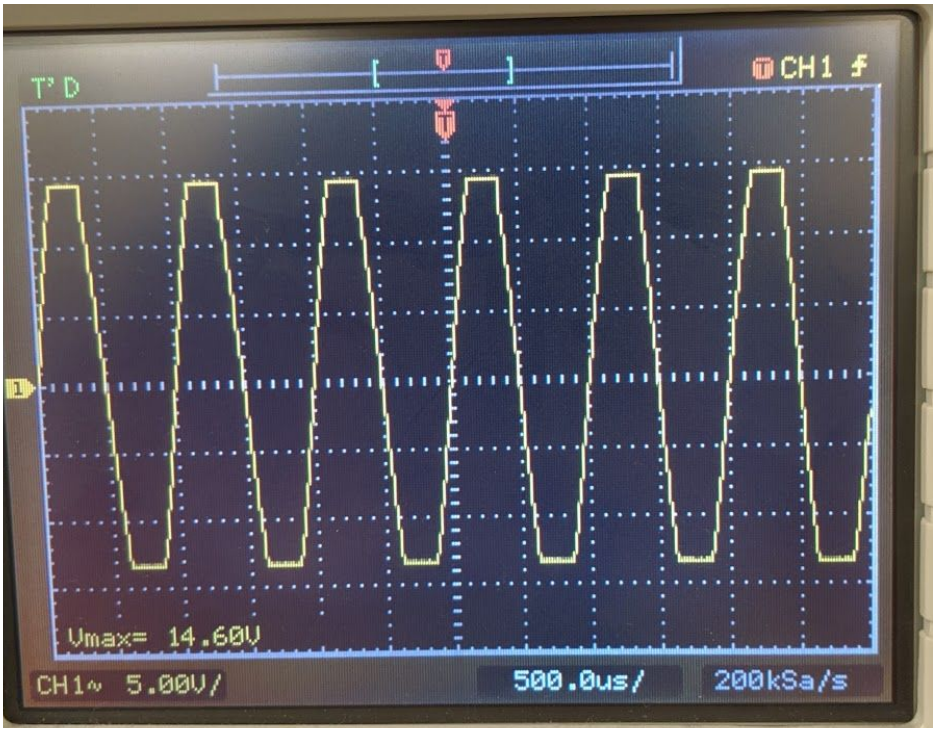
4) Current = 0.00084 mA, $\frac{1}{0.00084} = 1190.5 \sim 1.2\text{k}\Omega$

5) Error Voltage = -2.6304 V

6) Using Amplitude of 1 Vpp



Using Amplitude of 3 Vpp



The graph looks like this because it can't go larger than the input ±Vcc (+15,-15). Once it goes above the Vcc magnitude, the circuit because negatively and positively saturated.

Part B:

510Ω R :

- .514 V DMM
- .507 V Op Amp
- Percentage Error: .028%

1KΩ R:

- .987 V DMM
- .994 V Op Amp
- Percentage Error: .71%

3.9KΩ R:

- 3.915 V DMM
- 3.911 V Op Amp
- Percentage Error: .102 %

5.1kΩ R:

- 5.083 V DMM
- 5.064 V Op Amp
- Percentage Error: .374%

10kΩ R:

- 10.104 V DMM
- 10.067 V Op Amp
- Percentage Error: .366%