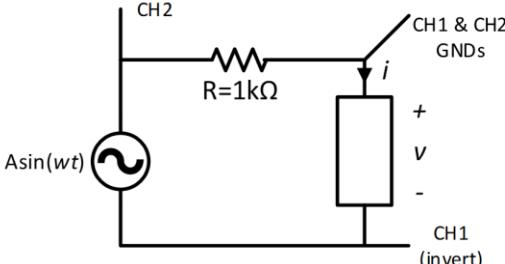
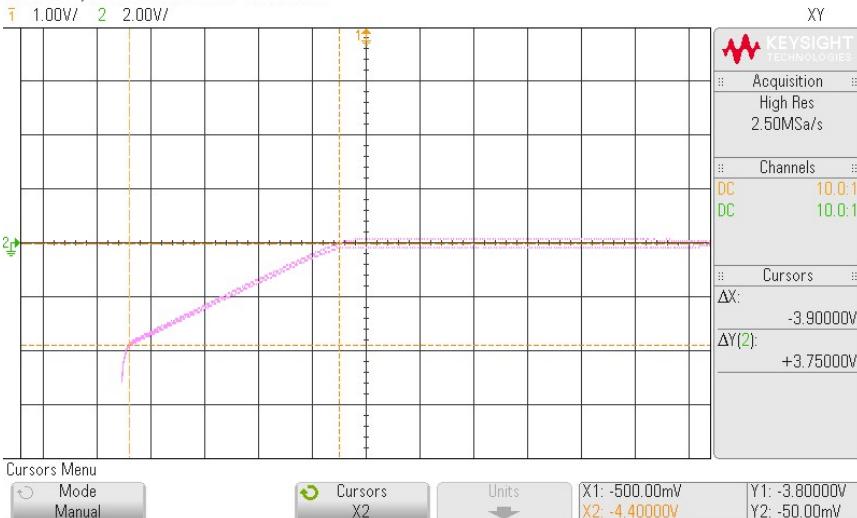
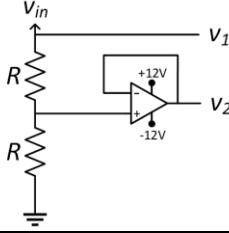
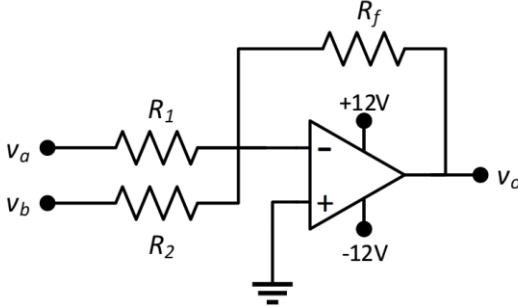
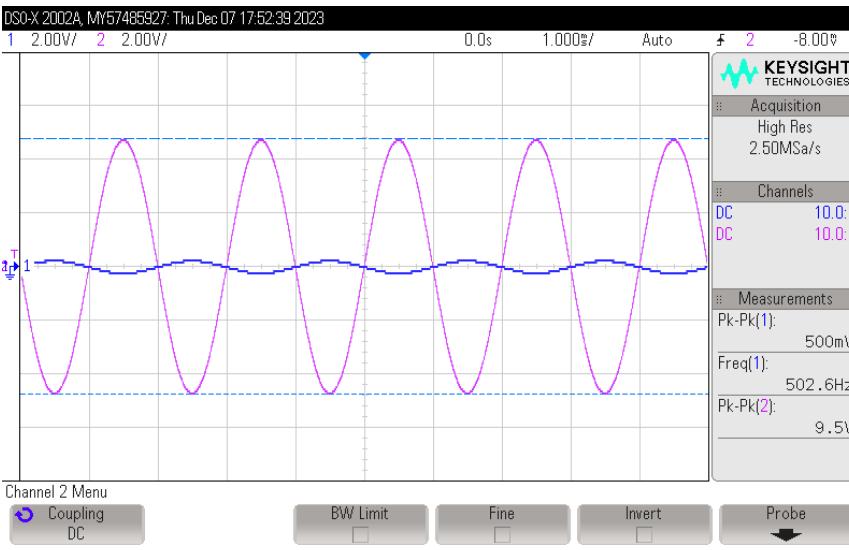


Tuesday Morning Results & Rubric

TuMQ1.

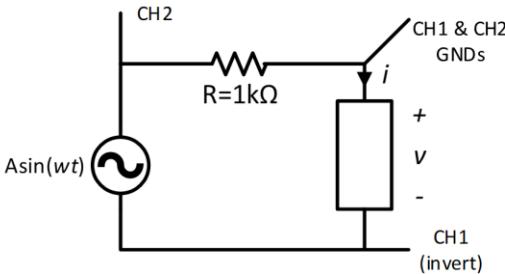
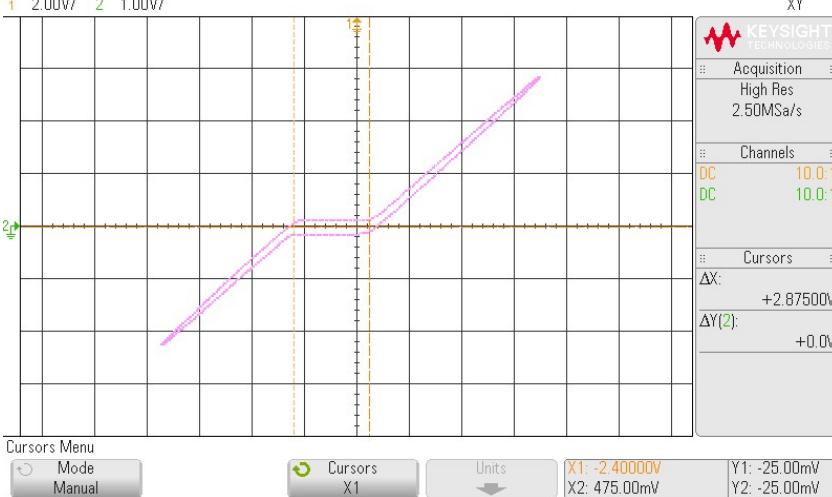
Q1.		
a)	Circuit configuration & explanation:	Q1A0 pts. total
Configuration (student may ask for this)		Q1A1 pt.
		
Signal generator parameters (student may ask for this only) $f = 30\text{Hz}$, $\omega = 2 * \pi * 30\text{rad/sec}$ (anything less than 100 Hz is okay) $A = 10V_p \equiv 20V_{pp}$ (anything big enough to show all breakpoints is okay)		Q1A2 pts.
Explanation: * Signal generator works as a floating output * CH1 inverted to measure v * CH2 indirectly measures the current ($iV_{1k\Omega} = i * 1k\Omega$)		Q1A3 pts.
b)	I vs V characteristics (TAKE A PICTURE)	Q1B0 pts. total
		
Photo correct (0 if student didn't show) - Missing critical points		Q1B1 pts.
Drawing correct - Without units - Without critical points - Only theoretical		Q1B2 pts.

TuMQ2.

Q2.		
a) Voltage buffer		Q2A0 pts. total
Configuration (student may ask for this)		Q2A1 pts.
		
Explanation of why we need a buffer (loading effect of input resistance of difference/summing amplifier)		Q2A2 pts.
b) Design		Q2B0 pts. total
Configuration (student may ask for this)		Q2B1 pts.
		
Parameters (student may ask for this) ALSO GIVE THE CONFIG. IF SELECTED WRONGLY		Q2B2 pts.
$R_1 = R_2 = 1k\Omega, R_f = 6.8k\Omega$		
c) Experimental results (TAKE A PICTURE)		Q2C0 pts. total
		
Photo correct (0 if student didn't show)		Q2C1 pts.
- Input amplitude wrong		
Drawing correct		Q2C2 pts.
- Without units		
- Without critical points		

Tuesday Afternoon Results & Rubric

TuAQ1.

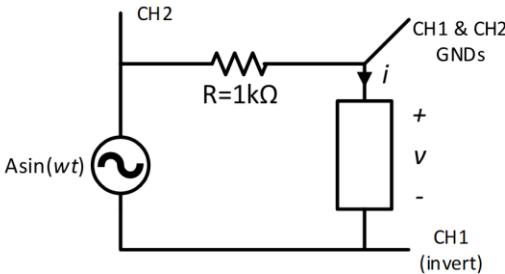
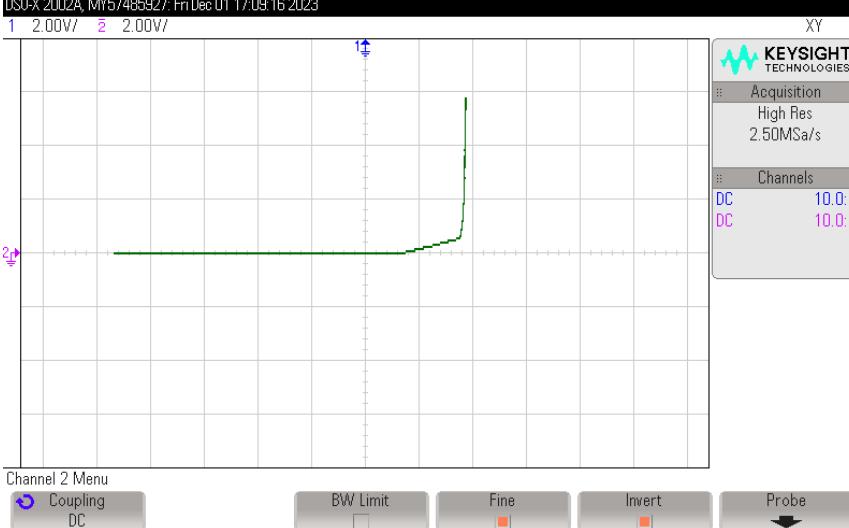
Q1.		
a) Circuit configuration & explanation:	Q1A0 pts. total	
Configuration (student may ask for this) 	Q1A1 pt.	
Signal generator parameters (student may ask for this only) $f = 30\text{Hz}$, $\omega = 2 * \pi * 30\text{rad/sec}$ (anything less than 100 Hz is okay) $A = 10V_p \equiv 20V_{pp}$ (anything big enough to show all breakpoints is okay)	Q1A2 pts.	
Explanation: * Signal generator works as a floating output * CH1 inverted to measure v * CH2 indirectly measures the current ($iR_{1k\Omega} = i * 1k\Omega$)	Q1A3 pts.	
b) I vs V characteristics (TAKE A PICTURE) 	Q1B0 pts. total	
Photo correct (0 if student didn't show) - Missing critical points	Q1B1 pts.	
Drawing correct - Without units - Without critical points - Only theoretical	Q1B2 pts.	

TuAQ2.

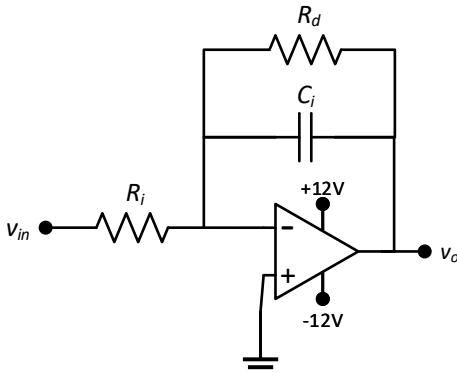
Q2.		
a) Drawing		Q2A0 pts. total
		Q2A1 pts.
		Q2A2 pts.
b) Design		Q2B0 pts. total
Configuration (student may ask for this)		Q2B1 pts.
Parameters (student may ask for this) ALSO GIVE THE CONFIG. IF SELECTED WRONGLY		Q2B2 pts.
$R_2 = R_3 = 4.7\text{k}\Omega, R_1 = 1\text{k}\Omega$		
c) Experimental results (TAKE A PICTURE)		Q2C0 pts. total
		Q2C1 pts.
Photo correct (0 if student didn't show) - Input amplitude wrong		
Drawing correct - Without units - Without critical points		Q2C2 pts.

Wednesday Morning Results & Rubric

WMQ1.

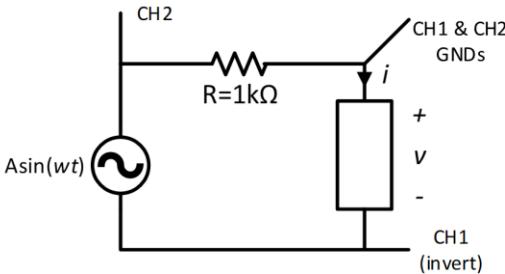
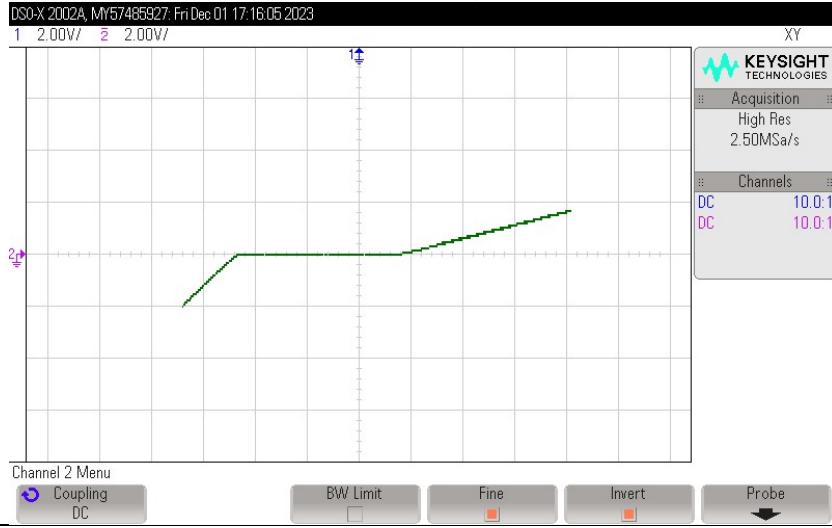
Q1.		
a) Circuit configuration & explanation: Configuration (student may ask for this)	Q1A0 pts. total	Q1A1 pt.
 <p>CH2 R=1kΩ Asin(wt) i CH1 & CH2 GNDs + v - CH1 (invert)</p>	Q1A2 pts.	Q1A3 pts.
Signal generator parameters (student may ask for this only) $f = 30\text{Hz}$, $\omega = 2 * \pi * 30\text{rad/sec}$ (anything less than 100 Hz is okay) $A = 10V_p \equiv 20V_{pp}$ (anything big enough to show all breakpoints is okay)	Q1A2 pts.	Q1A3 pts.
Explanation: * Signal generator works as a floating output * CH1 inverted to measure v * CH2 indirectly measures the current ($iV_{1k\Omega} = i * 1k\Omega$)	Q1B0 pts. total	
b) I vs V characteristics (TAKE A PICTURE)		
 <p>DSO-X 2002A, MY5748527, Fri Dec 01 17:09:16 2023 1 2.00V/ 2 2.00V XY KEYSIGHT TECHNOLOGIES Acquisition: High Res 2.50MSa/s Channels: DC 10.0:1 DC 10.0:1 Channel 2 Menu: Coupling DC, BW Limit, Fine, Invert, Probe</p>	Q1B1 pts.	Q1B2 pts.
Photo correct (0 if student didn't show) <ul style="list-style-type: none"> - Missing critical points 	Q1B1 pts.	
Drawing correct <ul style="list-style-type: none"> - Without units - Without critical points - Only theoretical 	Q1B2 pts.	

WMQ2.

Q2.		
a) Drawing		Q2A0 pts. total
		Q2A1 pts.
		Q2A2 pts.
b) Design		Q2B0 pts. total
Configuration (student may ask for this)		Q2B1 pts.
		
Parameters (students may ask for this) ALSO GIVE THE CONFIG. IF SELECTED WRONGLY $C_i = 1 \mu F$ (given), $R_i = 2.7 k\Omega$		Q2B2 pts.
c) Experimental results (TAKE A PICTURE)		Q2C0 pts. total
		Q2C1 pts.
Photo correct (0 if student didn't show) - Input amplitude wrong		
Drawing correct - Without units - Without critical points		Q2C2 pts.

Wednesday Afternoon Results & Rubric

WAQ1.

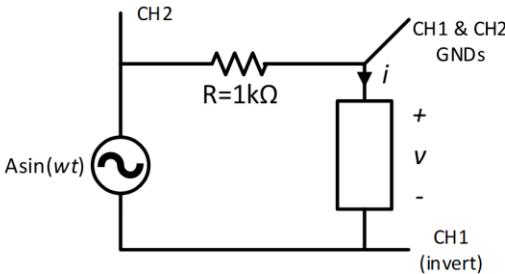
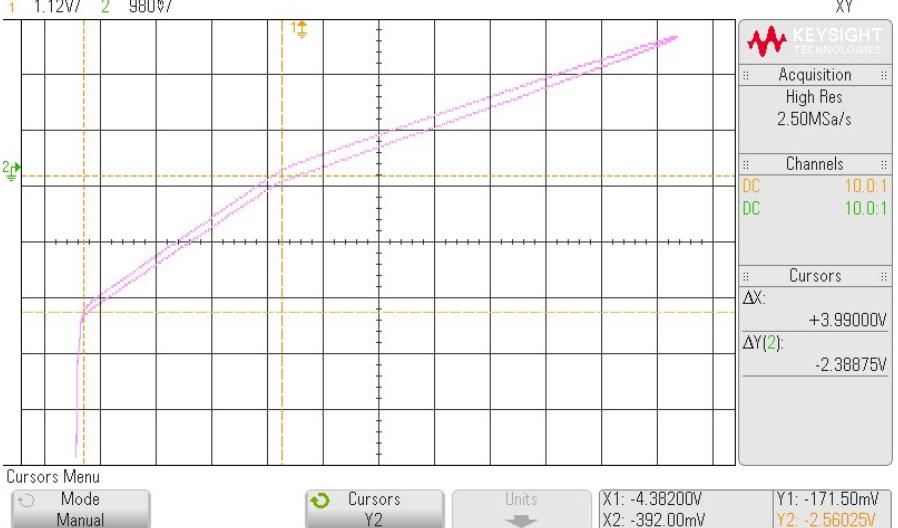
Q1.		
a) Circuit configuration & explanation: Configuration (student may ask for this)		Q1A0 pts. total
 <p>CH2</p> <p>R=1kΩ</p> <p>Asin(wt)</p> <p>i</p> <p>CH1 & CH2 GNDs</p> <p>v</p> <p>CH1 (invert)</p>	Q1A1 pt.	
Signal generator parameters (student may ask for this only) $f = 30\text{Hz}$, $\omega = 2 * \pi * 30\text{rad/sec}$ (anything less than 100 Hz is okay) $A = 10V_p \equiv 20V_{pp}$ (anything big enough to show all breakpoints is okay)	Q1A2 pts.	
Explanation: * Signal generator works as a floating output * CH1 inverted to measure v * CH2 indirectly measures the current ($iV_{1k\Omega} = i * 1k\Omega$)	Q1A3 pts.	
b) I vs V characteristics (TAKE A PICTURE)	 <p>DSO-X 2002A, MY57485927, Fri Dec 01 17:16:05 2023</p> <p>1 2.00V/ 2 2.00V/</p> <p>XY</p> <p>KEYSIGHT TECHNOLOGIES</p> <p>Acquisition</p> <p>High Res</p> <p>2.50MSa/s</p> <p>Channels</p> <p>DC 10.0:1</p> <p>DC 10.0:1</p> <p>Channel 2 Menu</p> <p>Coupling DC</p> <p>BW Limit</p> <p>Fine</p> <p>Invert</p> <p>Probe</p>	Q1B0 pts. total
Photo correct (0 if student didn't show) - Missing critical points	Q1B1 pts.	
Drawing correct - Without units - Without critical points - Only theoretical	Q1B2 pts.	

WAQ2.

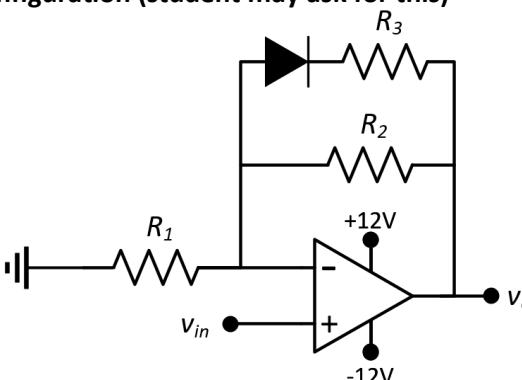
Q2.		
a) Drawing		Q2A0 pts. total
		Q2A1 pts.
		Q2A2 pts.
b) Design		Q2B0 pts. total
Configuration (student may ask for this)		Q2B1 pts.
Parameters (students may ask for this) ALSO GIVE THE CONFIG. IF SELECTED WRONGLY $C_d = 47 \text{ nF}$ (given), $R_d = 1.5\text{k}\Omega$		Q2B2 pts.
c) Experimental results (TAKE A PICTURE)		Q2C0 pts. total
		Q2C1 pts.
Photo correct (0 if student didn't show) - Input amplitude wrong		
Drawing correct - Without units - Without critical points		Q2C2 pts.

Thursday Afternoon Results & Rubric

ThAQ1.

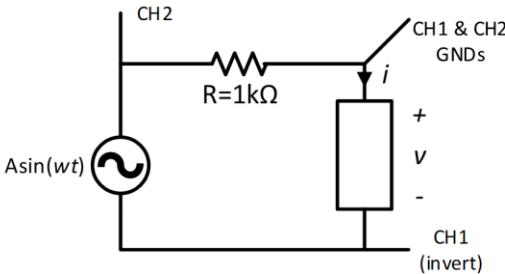
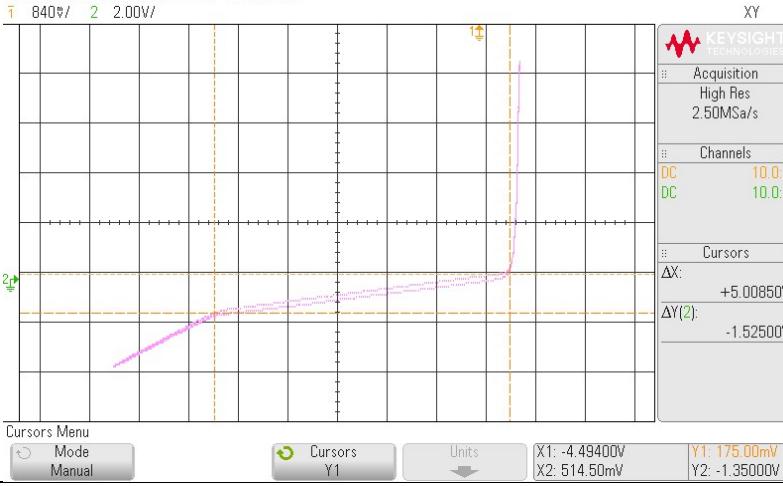
Q1.		
a) Circuit configuration & explanation:	Q1A0 pts. total	
Configuration (student may ask for this) 	Q1A1 pt.	
Signal generator parameters (student may ask for this only) $f = 30\text{Hz}$, $\omega = 2 * \pi * 30\text{rad/sec}$ (anything less than 100 Hz is okay) $A = 10V_p \equiv 20V_{pp}$ (anything big enough to show all breakpoints is okay)	Q1A2 pts.	
Explanation: * Signal generator works as a floating output * CH1 inverted to measure v * CH2 indirectly measures the current ($iV_{1k\Omega} = i * 1k\Omega$)	Q1A3 pts.	
b) I vs V characteristics (TAKE A PICTURE) 	Q1B0 pts. total	
Photo correct (0 if student didn't show) - Missing critical points	Q1B1 pts.	
Drawing correct - Without units - Without critical points - Only theoretical	Q1B2 pts.	

ThAQ2.

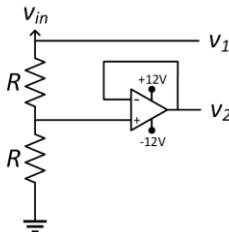
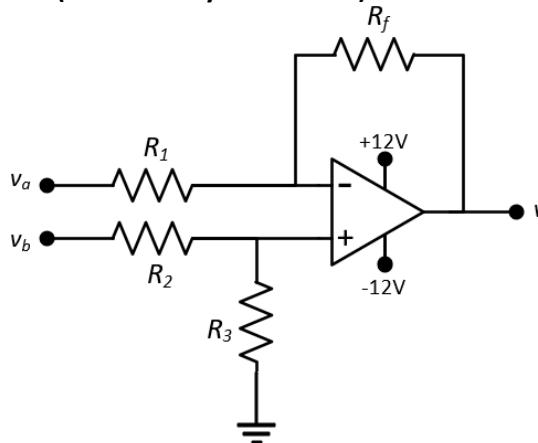
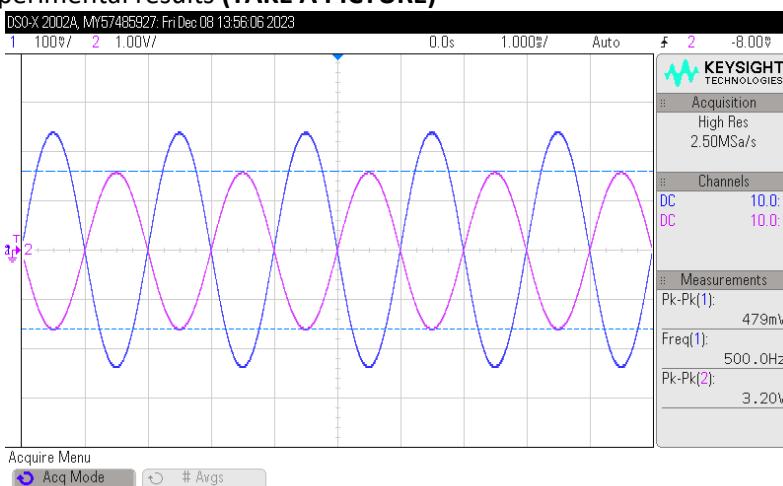
Q2.		
a) Drawing		Q2A0 pts. total
		Q2A1 pts.
		Q2A2 pts.
b) Design		Q2B0 pts. total
Configuration (student may ask for this)		Q2B1 pts.
		
Parameters (student may ask for this) ALSO GIVE THE CONFIG. IF SELECTED WRONGLY		Q2B2 pts.
$R_1 = 1k\Omega, R_2 = R_3 = 3.9k\Omega$		
c) Experimental results (TAKE A PICTURE)		Q2C0 pts. total
		Q2C1 pts.
Photo correct (0 if student didn't show) - Input amplitude wrong		
Drawing correct - Without units - Without critical points		Q2C2 pts.

Monday Afternoon Results & Rubric

MAQ1.

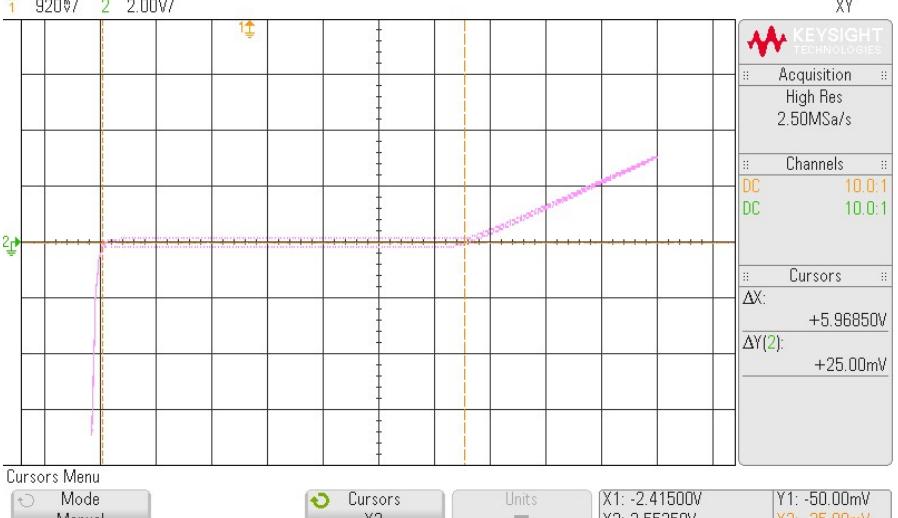
Q1.		
a) Circuit configuration & explanation:	Q1A0 pts. total	
Configuration (student may ask for this) 	Q1A1 pt.	
Signal generator parameters (student may ask for this only) $f = 30\text{Hz}$, $\omega = 2 * \pi * 30\text{rad/sec}$ (anything less than 100 Hz is okay) $A = 10V_p \equiv 20V_{pp}$ (anything big enough to show all breakpoints is okay)	Q1A2 pts.	
Explanation: * Signal generator works as a floating output * CH1 inverted to measure v * CH2 indirectly measures the current ($iR_{1k\Omega} = i * 1k\Omega$)	Q1A3 pts.	
b) I vs V characteristics (TAKE A PICTURE) 	Q1B0 pts. total	
Photo correct (0 if student didn't show) - Missing critical points	Q1B1 pts.	
Drawing correct - Without units - Without critical points - Only theoretical	Q1B2 pts.	

MAQ2.

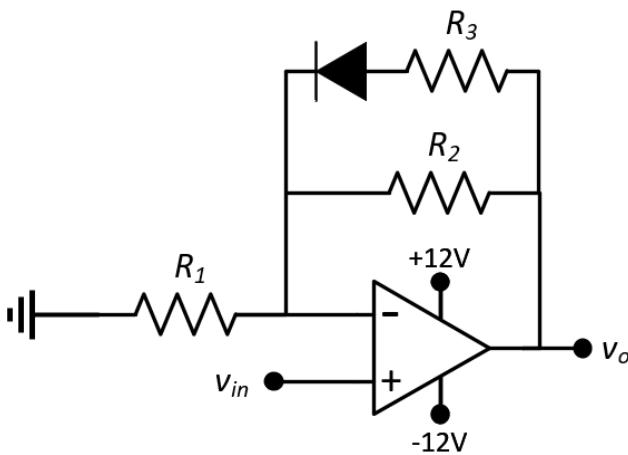
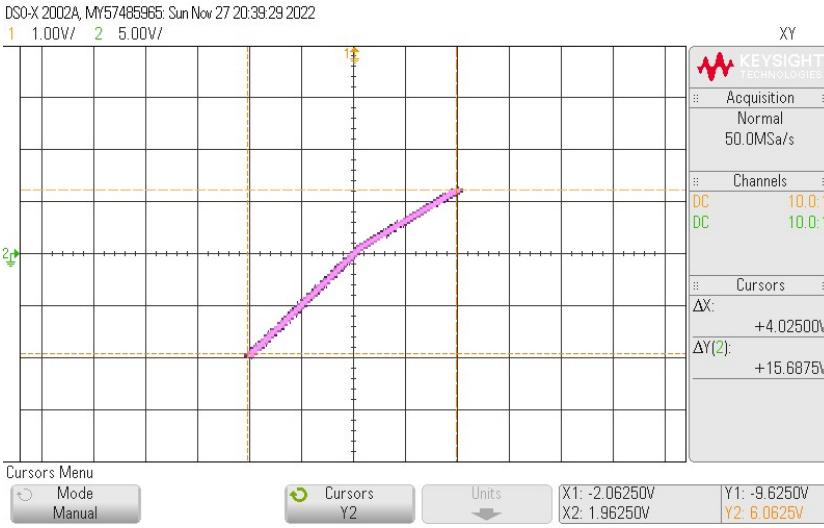
Q2.		
a) Voltage buffer	Q2A0 pts. total	
Configuration (student may ask for this)	Q2A1 pts.	
		
Explanation of why we need a buffer (loading effect of input resistance of difference/summing amplifier)	Q2A2 pts.	
b) Design	Q2B0 pts. total	
Configuration (student may ask for this)	Q2B1 pts.	
		
Parameters (student may ask for this) ALSO GIVE THE CONFIG. IF SELECTED WRONGLY	Q2B2 pts.	
$R_1 = R_2 = 1k\Omega, R_3 = R_f = 8.2k\Omega$		
c) Experimental results (TAKE A PICTURE)	Q2C0 pts. total	
		
Photo correct (0 if student didn't show)	Q2C1 pts.	
- Input amplitude wrong		
Drawing correct	Q2C2 pts.	
- Without units		
- Without critical points		

Monday Morning Results & Rubric

MMQ1.

Q1.		
a) Circuit configuration & explanation: Configuration (student may ask for this)		Q1A0 pts. total
<p>CH2</p> <p>R = 1kΩ</p> <p>i</p> <p>CH1 & CH2 GNDs</p> <p>v</p> <p>CH1 (invert)</p>		Q1A1 pt.
Signal generator parameters (student may ask for this only) $f = 30\text{Hz}$, $\omega = 2 * \pi * 30\text{rad/sec}$ (anything less than 100 Hz is okay) $A = 10V_p \equiv 20V_{pp}$ (anything big enough to show all breakpoints is okay)		Q1A2 pts.
Explanation: * Signal generator works as a floating output * CH1 inverted to measure v * CH2 indirectly measures the current ($iV_{1k\Omega} = i * 1k\Omega$)		Q1A3 pts.
b) I vs V characteristics (TAKE A PICTURE)	DSO-X 2002A, MY57235706, Sun Nov 27 20:07:24 2022 1 920V/ 2 2.00V/ 	Q1B0 pts. total
Photo correct (0 if student didn't show) - Missing critical points		Q1B1 pts.
Drawing correct - Without units - Without critical points - Only theoretical		Q1B2 pts.

MMQ2.

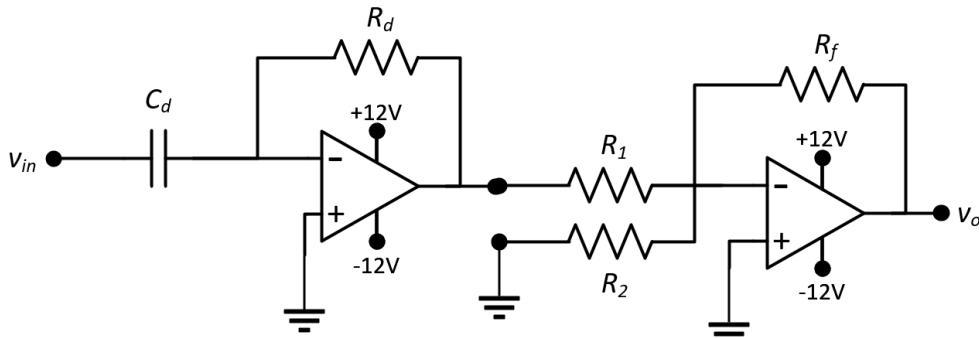
Q2.		
a) Drawing		Q2A0 pts. total
		Q2A1 pts.
		Q2A2 pts.
b) Design Configuration (student may ask for this)		Q2B0 pts. total
		Q2B1 pts.
Parameters (student may ask for this) ALSO GIVE THE CONFIG. IF SELECTED WRONGLY $R_1 = 1k\Omega, R_2 = R_3 = 3.9k\Omega$		Q2B2 pts.
c) Experimental results (TAKE A PICTURE)		Q2C0 pts. total
		Q2C1 pts.
Photo correct (0 if student didn't show) - Input amplitude wrong		
Drawing correct - Without units - Without critical points		Q2C2 pts.

Make-Up Results & Rubric

MUQ1.

Q1.	
a) Circuit configuration & explanation: Configuration (student may ask for this)	Q1A0 pts. total
<p>CH2</p> <p>R=1kΩ</p> <p>Asin(wt)</p> <p>i</p> <p>CH1 & CH2 GNDs</p> <p>+</p> <p>v</p> <p>-</p> <p>CH1 (invert)</p>	Q1A1 pt.
Signal generator parameters (student may ask for this only) $f = 30\text{Hz}$, $\omega = 2 * \pi * 30\text{rad/sec}$ (anything less than 100 Hz is okay) $A = 10V_p \equiv 20V_{pp}$ (anything big enough to show all breakpoints is okay)	Q1A2 pts.
Explanation: * Signal generator works as a floating output * CH1 inverted to measure v * CH2 indirectly measures the current ($iV_{1k\Omega} = i * 1k\Omega$)	Q1A3 pts.
b) I vs V characteristics (TAKE A PICTURE)	Q1B0 pts. total
Photo correct (0 if student didn't show) - Missing critical points	Q1B1 pts.
Drawing correct - Without units - Without critical points - Only theoretical	Q1B2 pts.

MUQ2.

Q2.	
a) Drawing	Q2A0 pts. total
	Q2A1 pts.
	Q2A2 pts.
b) Design Configuration (student may ask for this)	Q2B0 pts. total
	Q2B1 pts.
Parameters (student may ask for this) ALSO GIVE THE CONFIG. IF SELECTED WRONGLY $R_1 = R_2 = R_f = 1k\Omega$ & $C_d = 47nF$ & $R_d = 1.5k\Omega$ (R_2 can be removed)	Q2B2 pts.
c) Experimental results (TAKE A PICTURE)	Q2C0 pts. total
	Q2C1 pts.
Photo correct (0 if student didn't show) - Input amplitude wrong	
Drawing correct - Without units - Without critical points	Q2C2 pts.