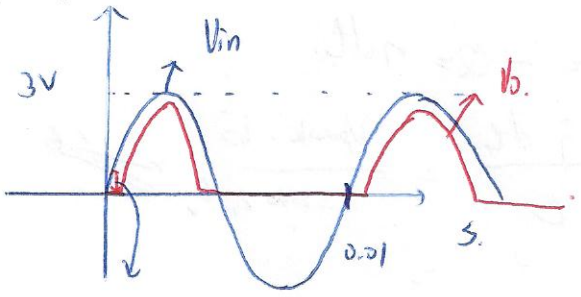
ENEE 307.

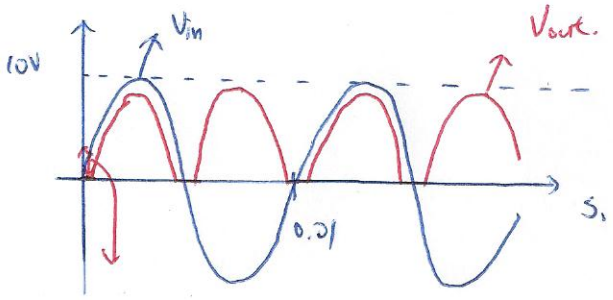
Prelab 1.

1. V.



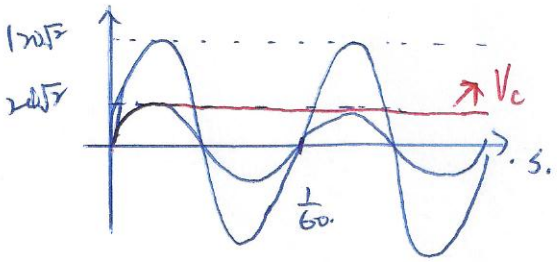

0.7 diode voltage drop.

2. V.



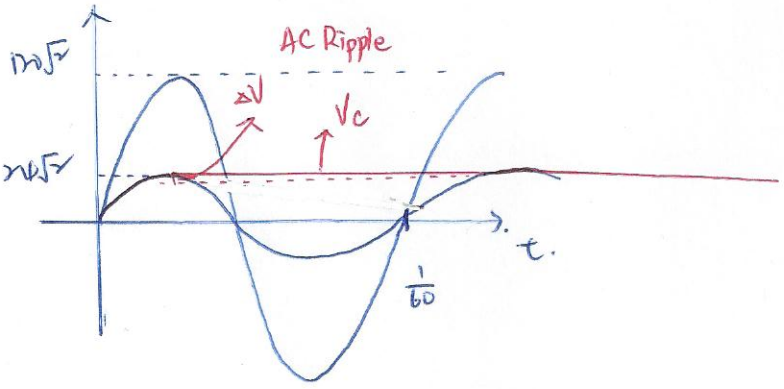

1.4. 2 diode voltage drop.

3.




assume no diode voltage drop.

4.




$C = \frac{Q}{V} \Rightarrow \Delta V = \frac{\int i\,dt}{C}$

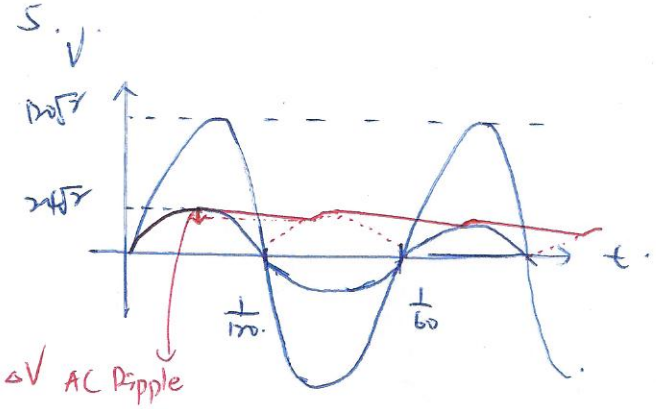
AC Ripple

5k. $\Delta V = \frac{20\sqrt{2} \times \frac{1}{60}}{2200 \times 10^{-6} \times 5 \times 10^{3}} \approx 51.4$ mV.

10k. $\Delta V \approx 25.7$ mV

100k $\Delta V \approx 2.57$ mV.

5.




Assume no diode voltage drop.

$t$ $\frac{1}{60} \rightarrow \frac{1}{120}$

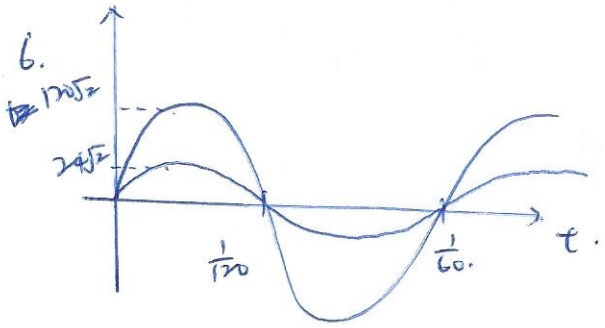
$\Delta V$

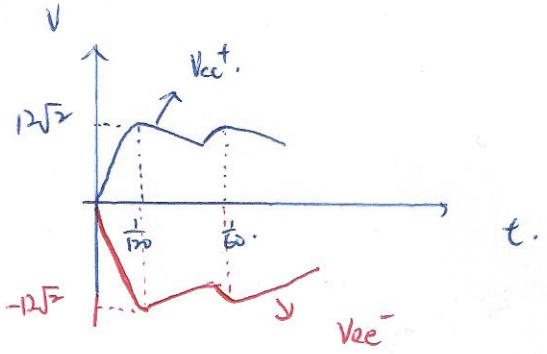
5k : 25.7 mV

10k : 12.85 mV

100k : 1.285 mV

6.




7. $A_V = 1 + \frac{R_f}{R_1} = 1 + 2 = 3$

8. $A_V = -\frac{R_f}{R_1} = -5$