

EE 320 Electronics

3/1/13

Lecture 11

Midterm 1 on Monday,
March 4!

Closed notes

Open book

No Laptop (QWERTY keyboard)

Calculator okay

Know Quizzes

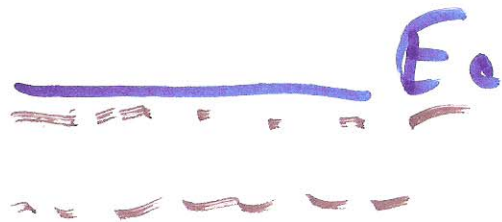
Integration
diode load line
Op-amp { Gain. BW open-loop
finite gain
offset

Know H.W.

short questions

How does n_i change with temp?

$T \uparrow n_i \uparrow$



$$I_D = n V_T \ln \frac{I_D}{I_S}$$

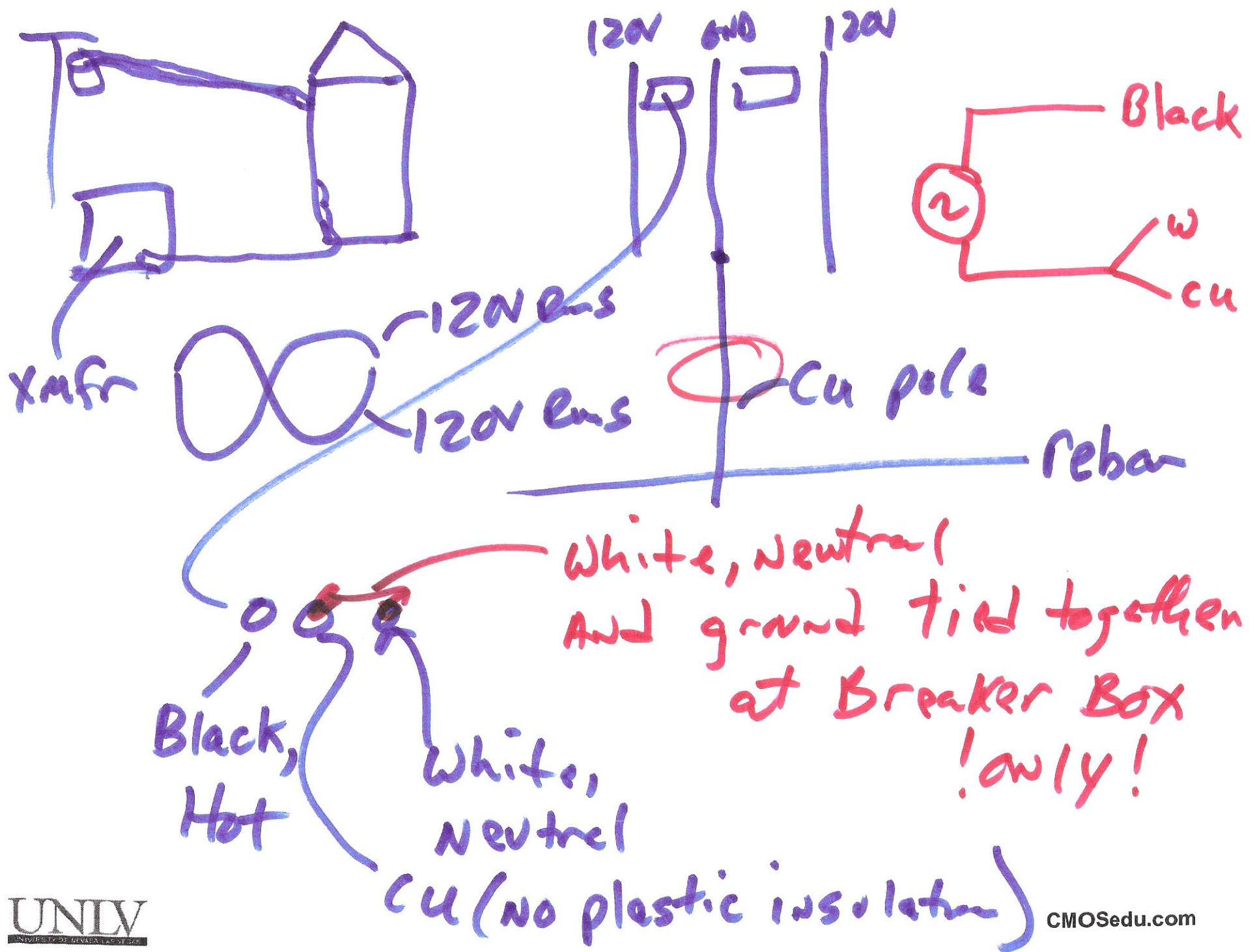
$$\boxed{NA} \quad \frac{n_i^2}{p} = n$$

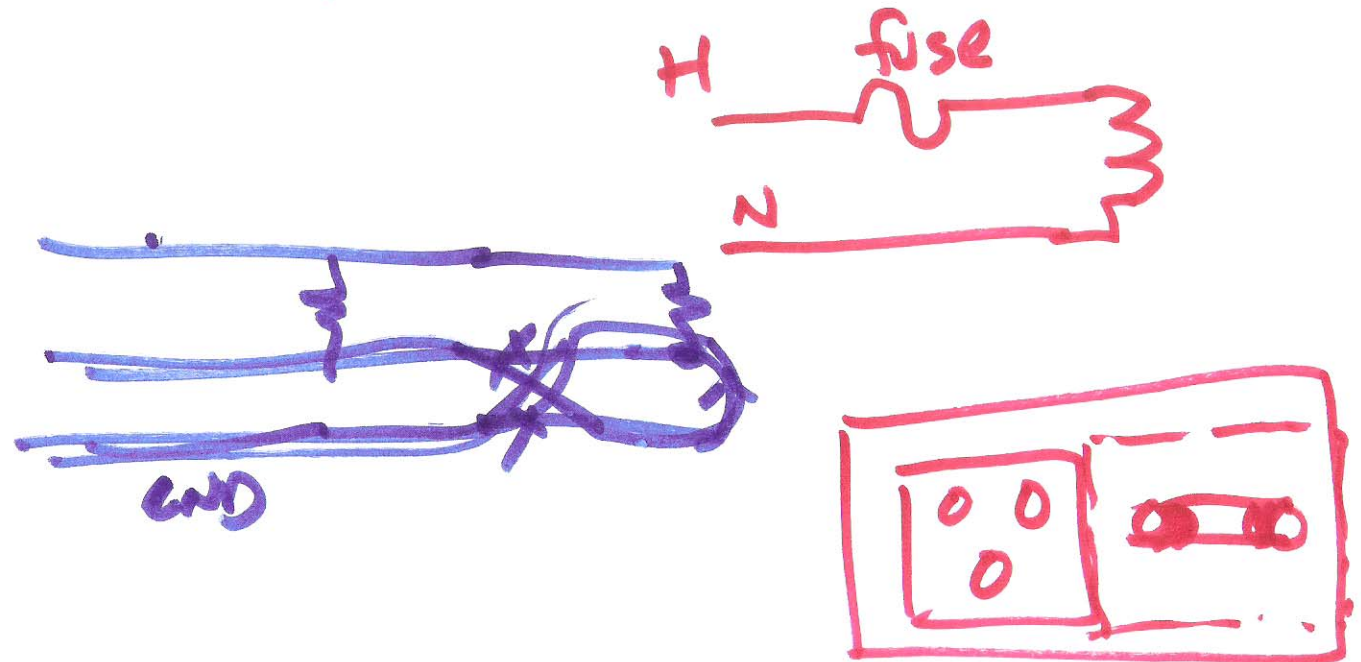
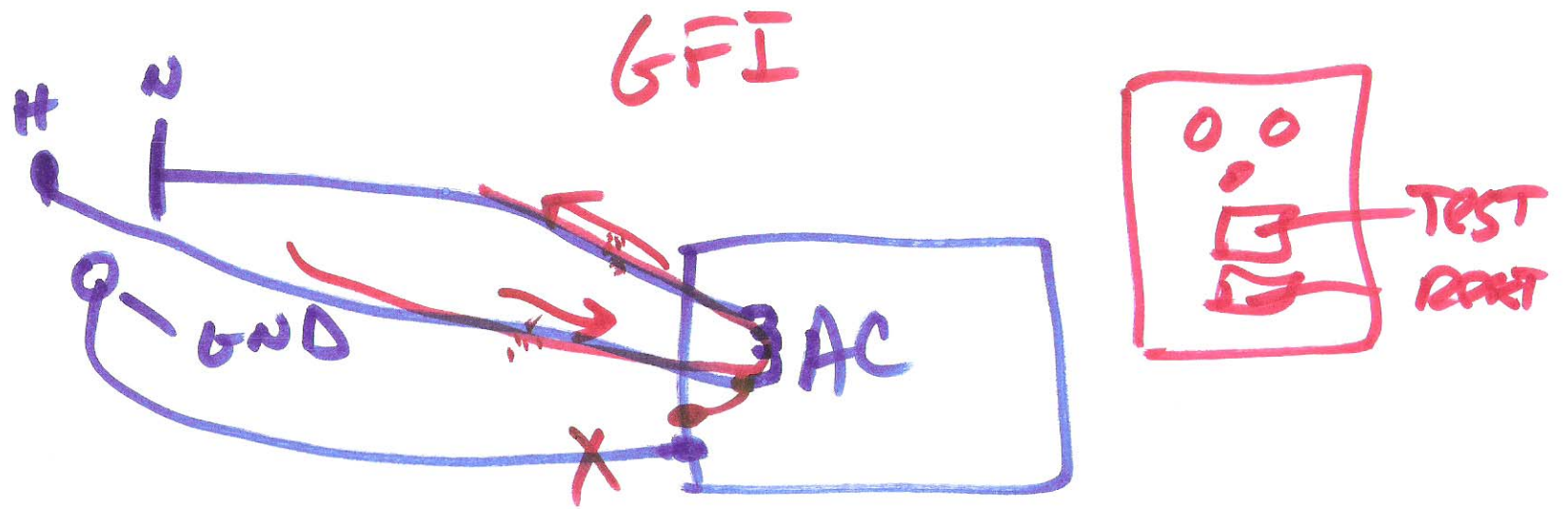
p-type How does p change with temp

Diode eqn.

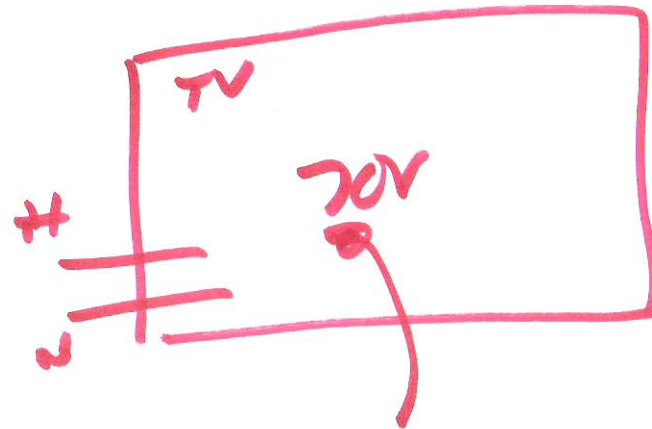
$$I_D = I_S e^{\frac{V_D}{n V_T}}$$

formatted Bits

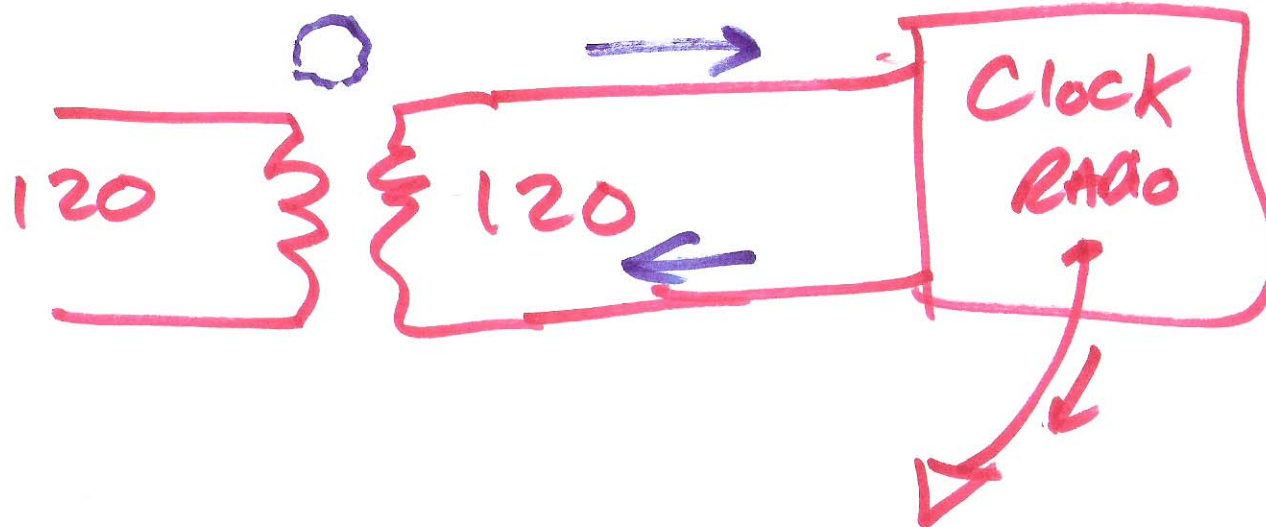




Clock radio

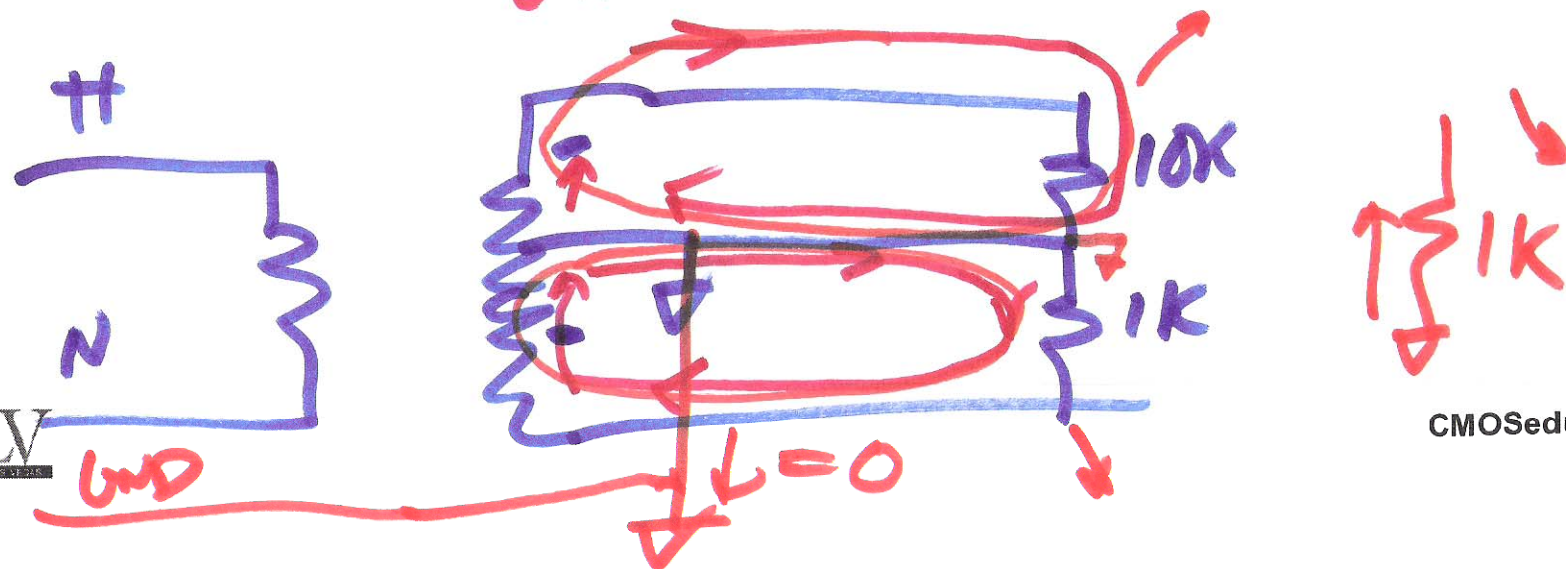
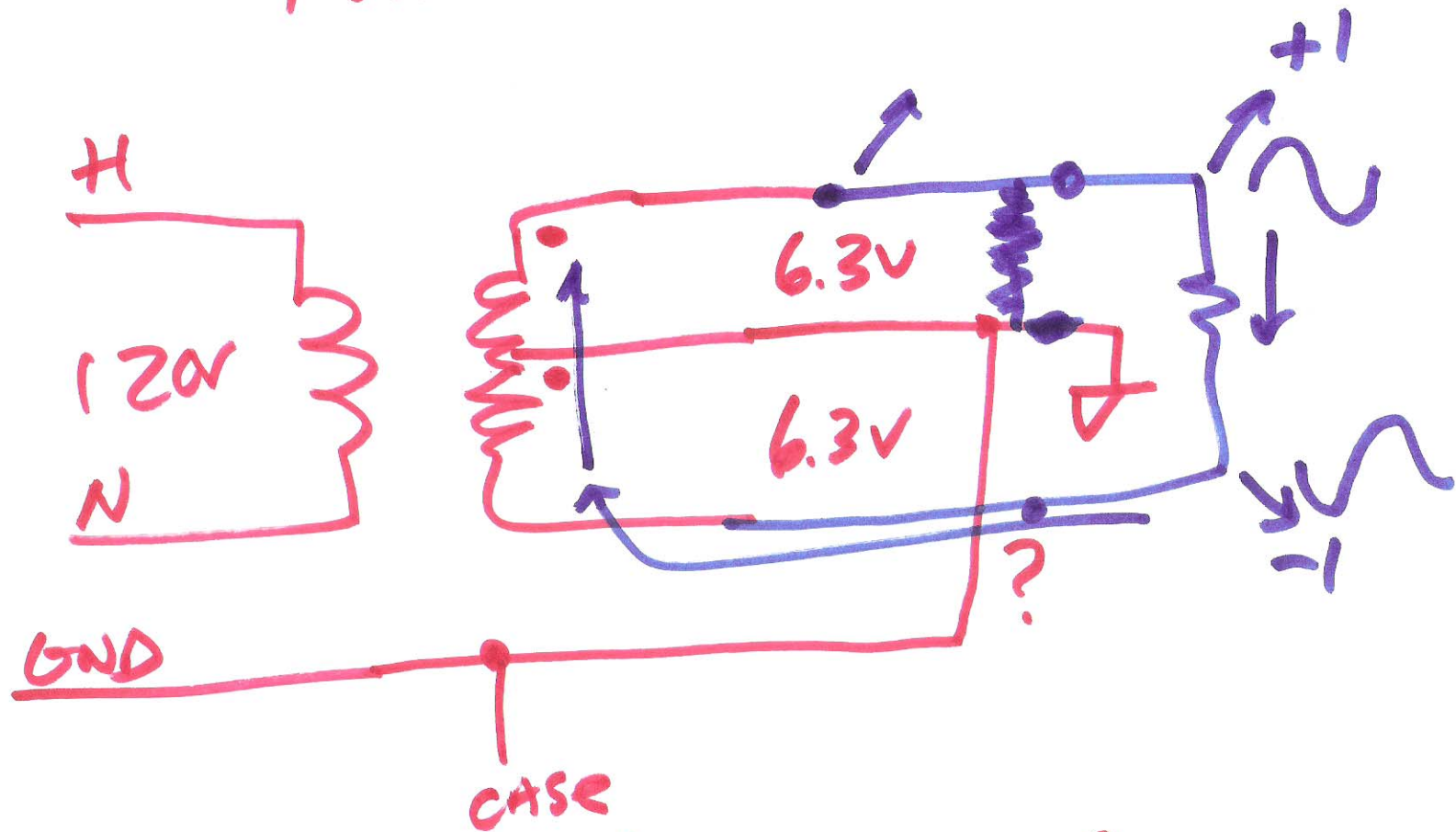


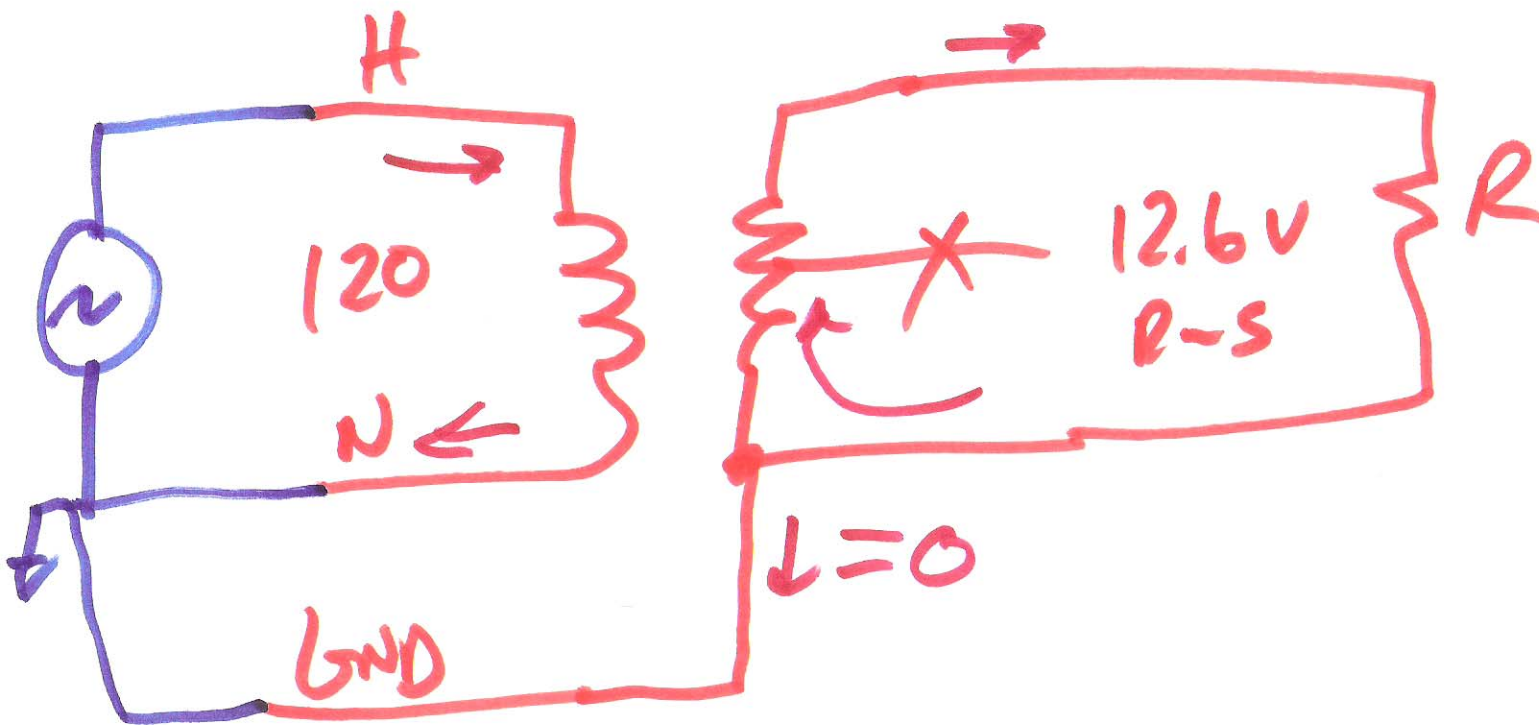
Isolation Xfr

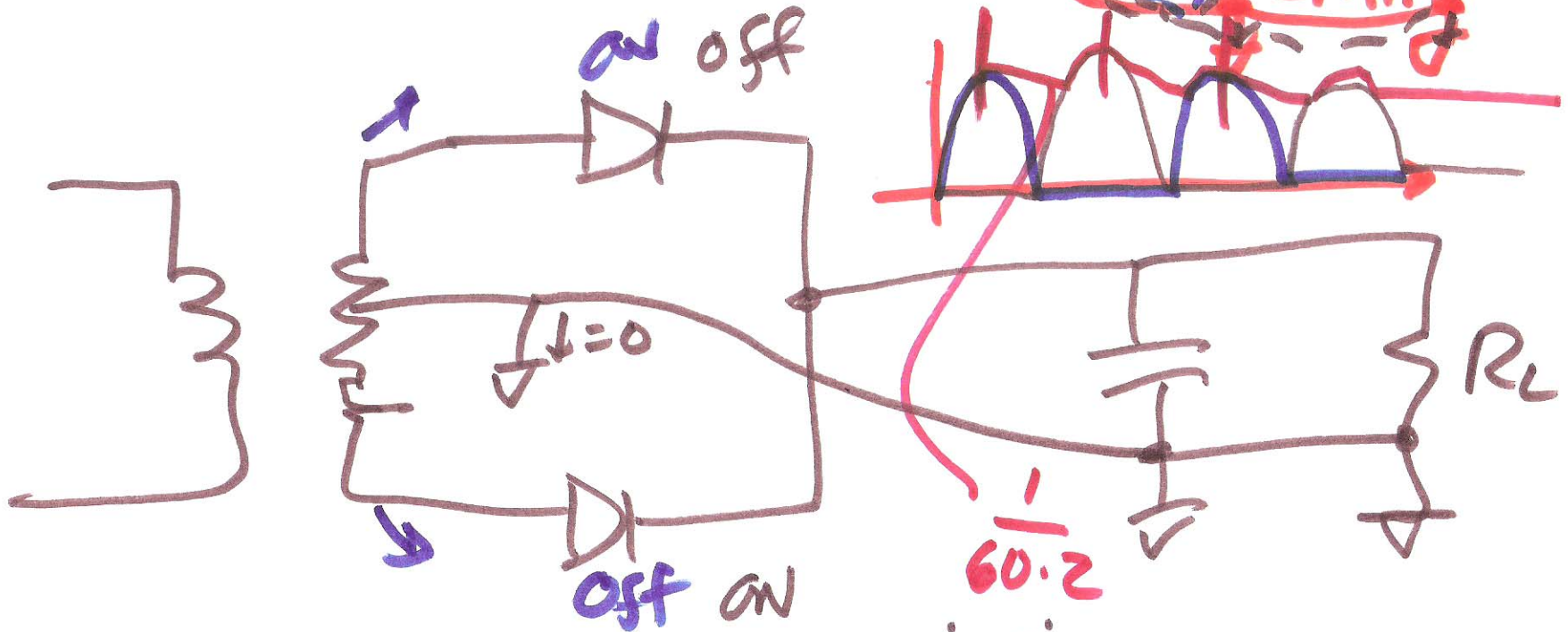
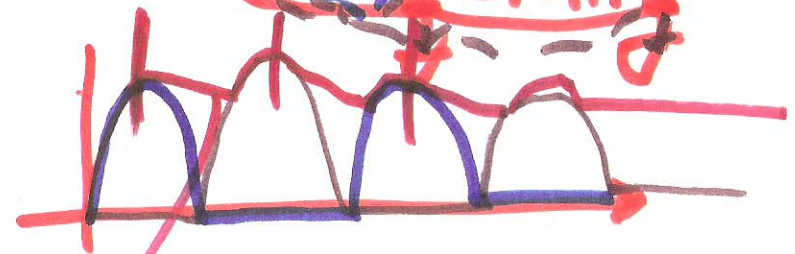
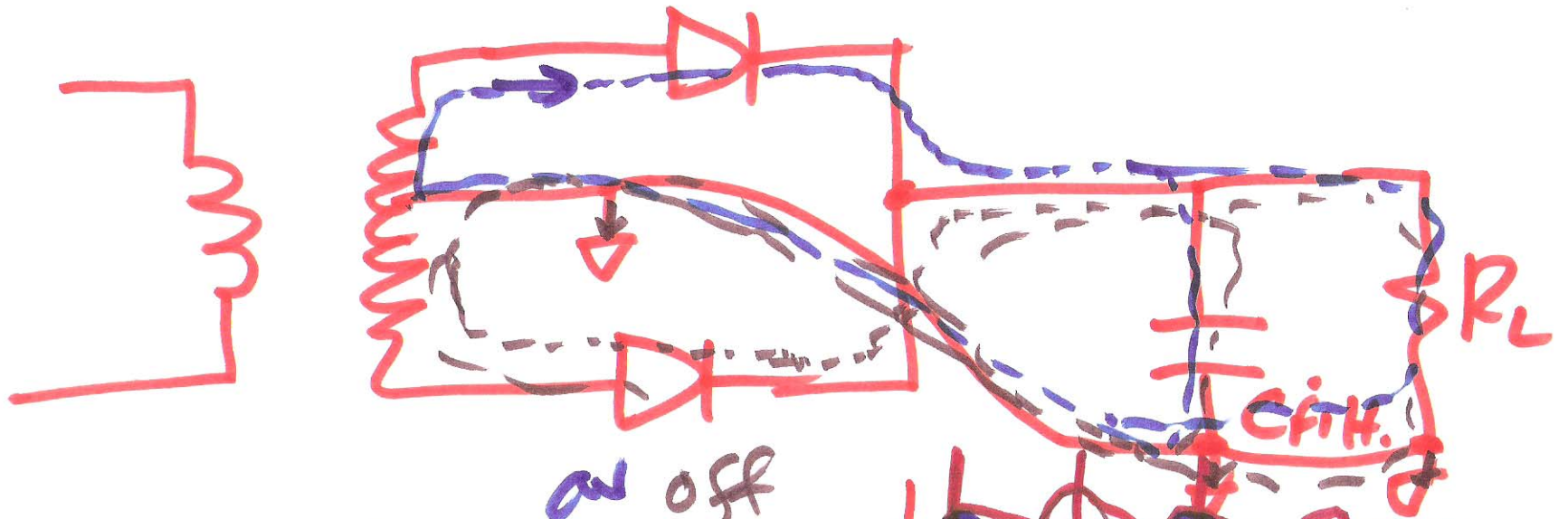


5)

Full-wave rectifiers

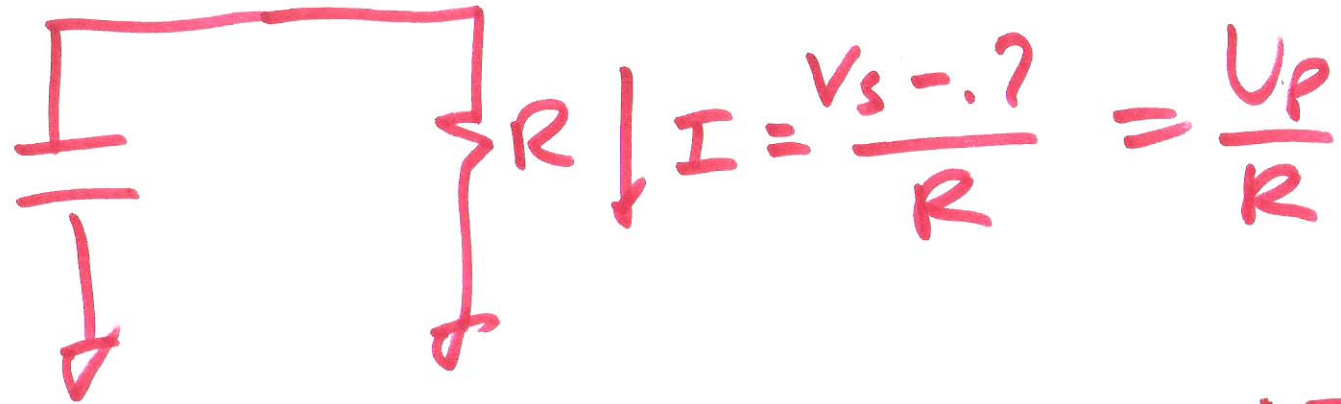






full-wave rectifier

$$V_s - .7 = V_p$$



$$I = C \frac{\Delta V}{\Delta T} \rightarrow \Delta V = \frac{I \cdot \Delta T}{C}$$

$$\Delta V = \frac{V_s - .7}{RC} \cdot \frac{T}{2}$$

