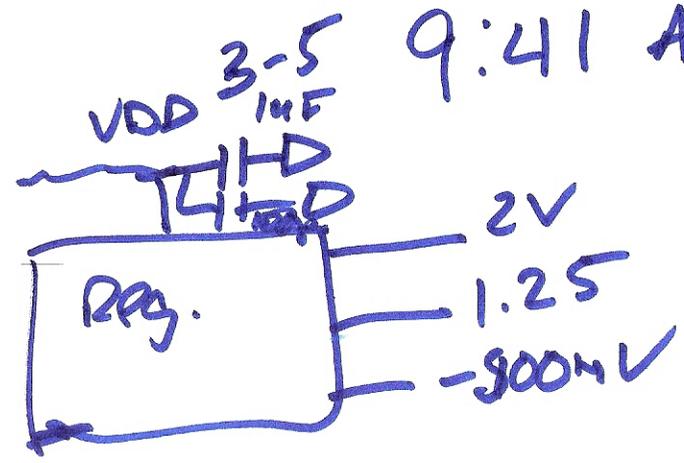
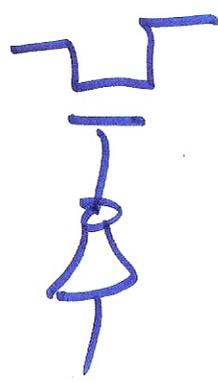


Lecture 34 Nov. 15, 2010

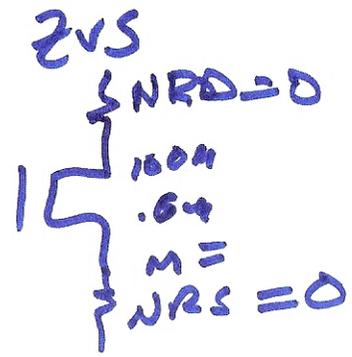
projects due two weeks from today

NO LATE PROJECTS ACCEPTED ;)

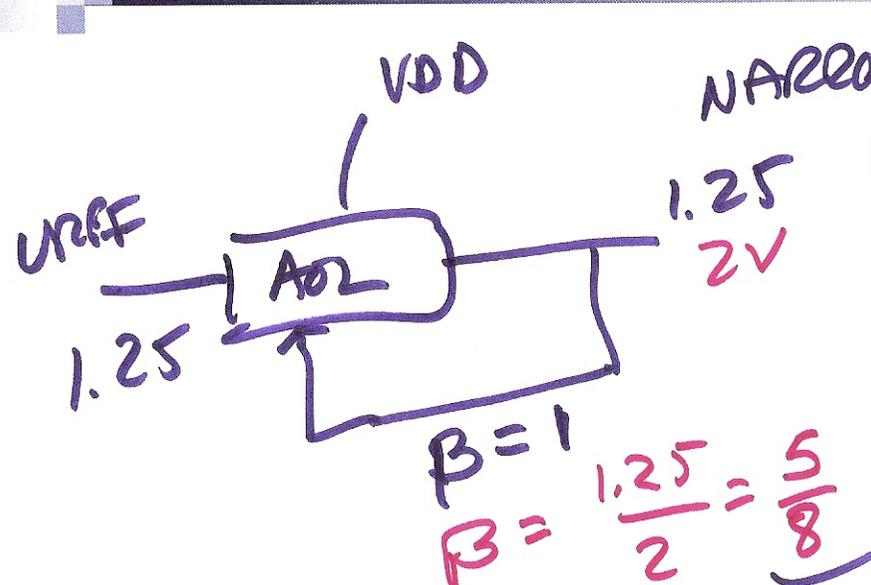


$$\text{Eff \%} = \frac{I_o \cdot V_o}{I_s \cdot V_s}$$

9:41 AM in my in box
BUCK $\rightarrow V_o = 0V_s$



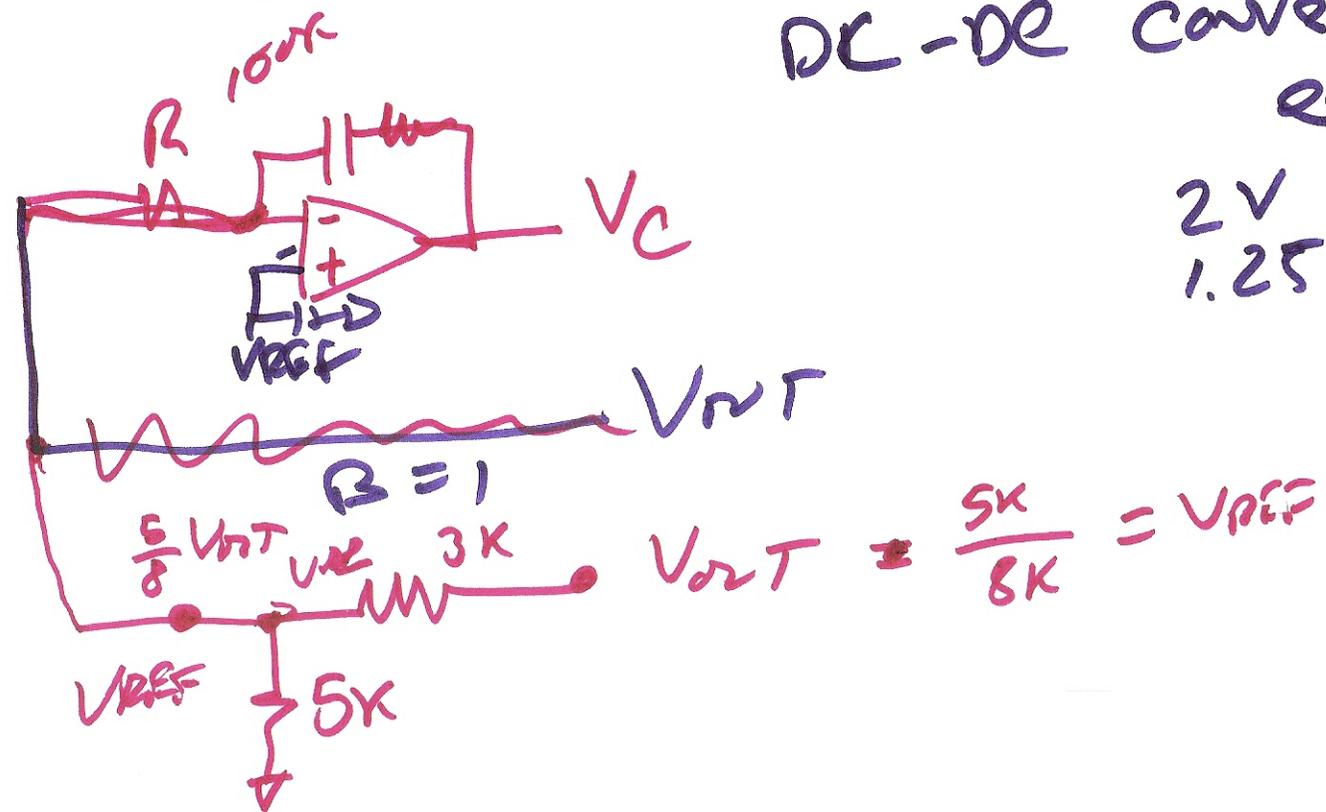
1)



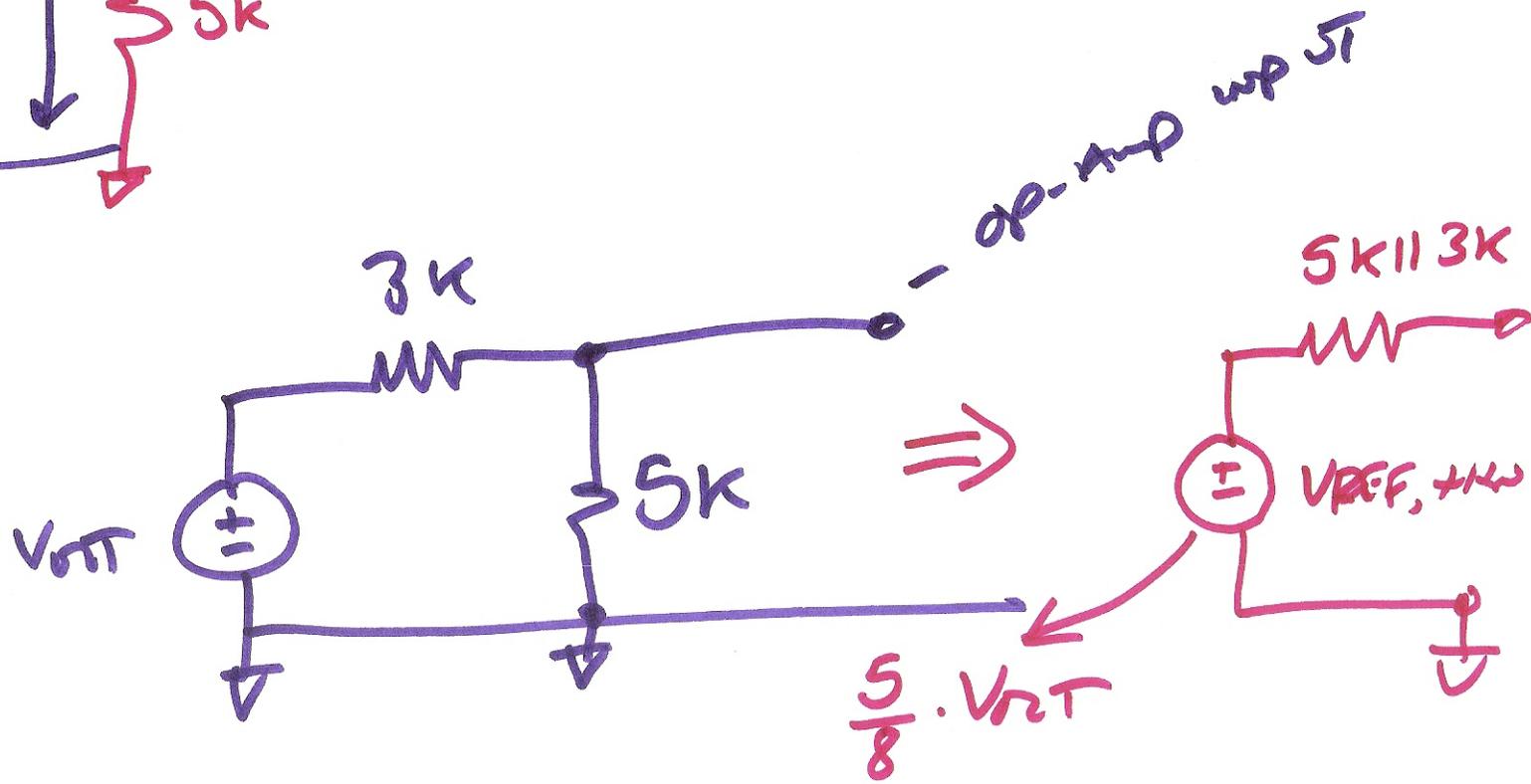
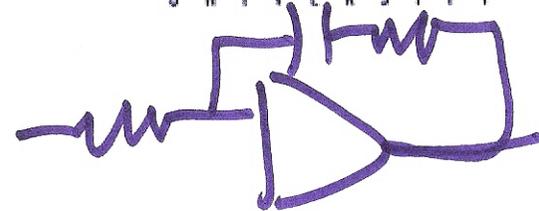
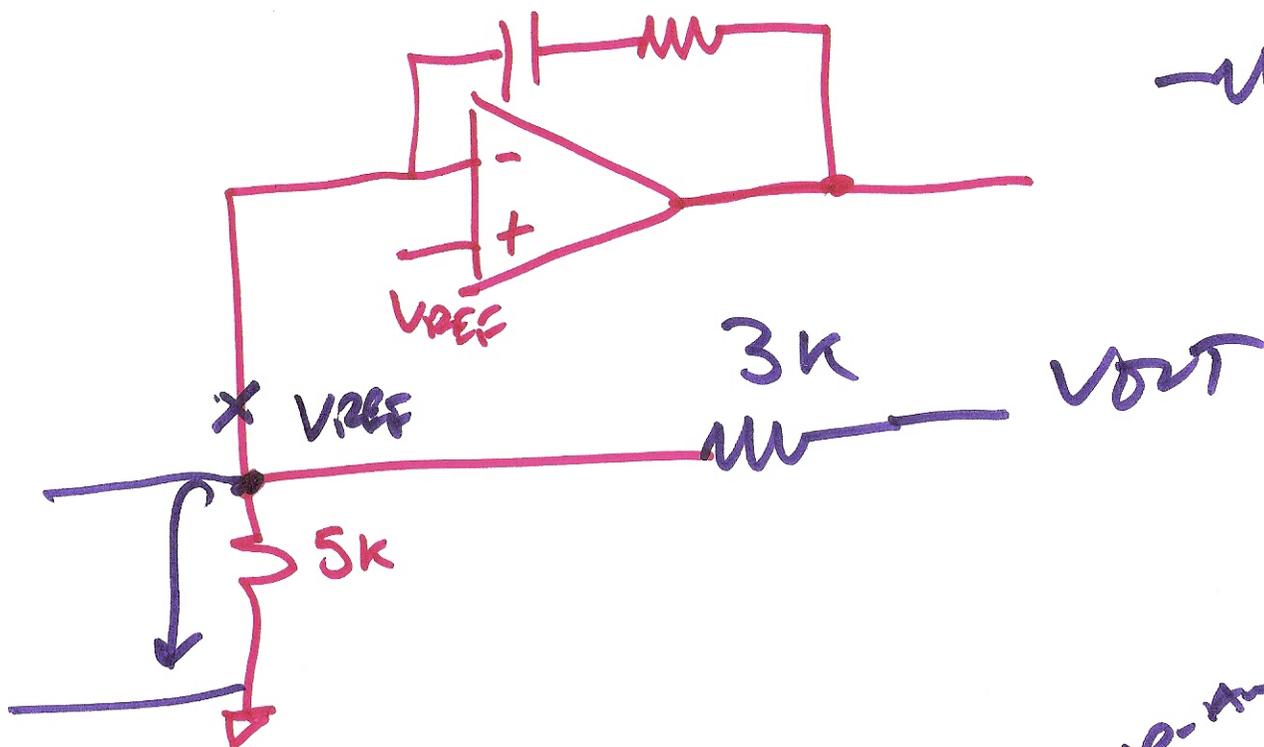
NARRATIVE IDEAL Block diagram

$R \neq C \neq L \neq f$
 Simulate op-amp resp. (ideal)
 Buck w VARYING loads

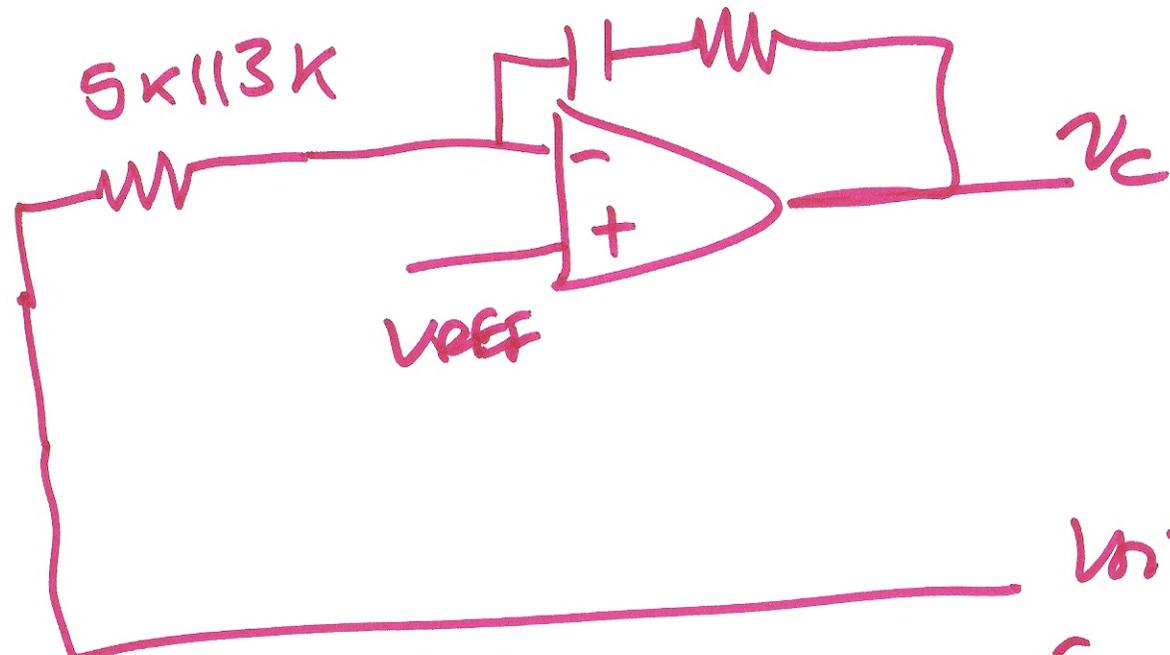
DC-DC converter every thing!
 2V @ VARYING load current
 1.25 @



2)



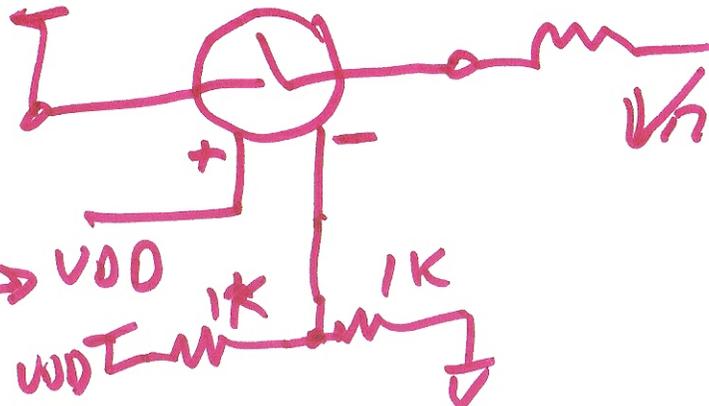
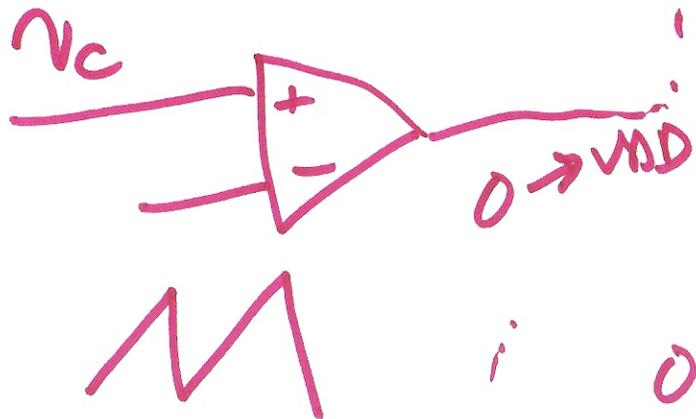
3)



$V_{DT}, +HV.$

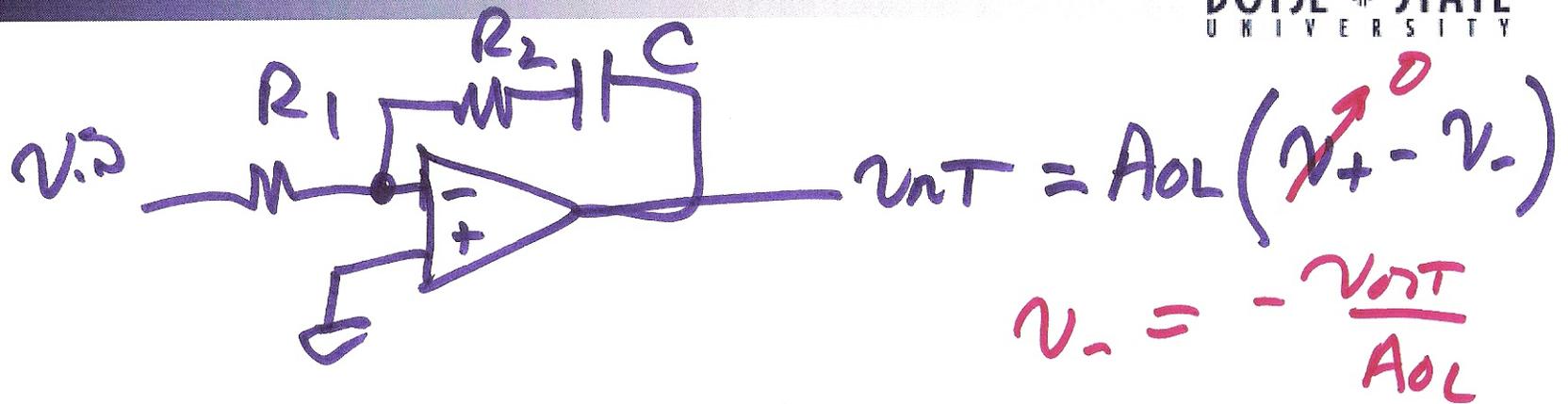
$$\frac{S}{8} \cdot V_{DT}$$

$$= V_{REF}$$



$$V_{DT} = \frac{8}{S} \cdot V_{REF}$$

4)



$$\frac{v_{in} - v_-}{R_1} = \frac{v_- - v_{out}}{R_2 + \frac{1}{j\omega C}}$$

$$A_{OL} = \frac{10^5}{1 + j \frac{f}{100}} \approx \frac{10^5}{j \frac{f}{100}} = \frac{1}{j \frac{f}{10^7}}$$

$$|A_{OL}| = \frac{10^7}{f} \quad f \gg 100$$

5)