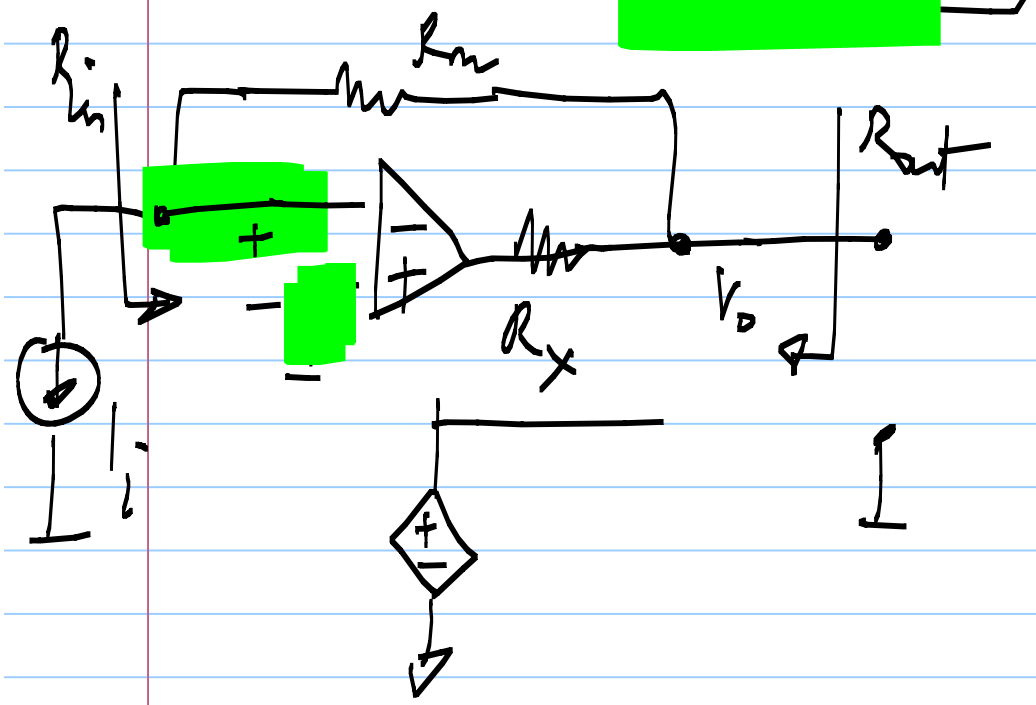
EE 2019

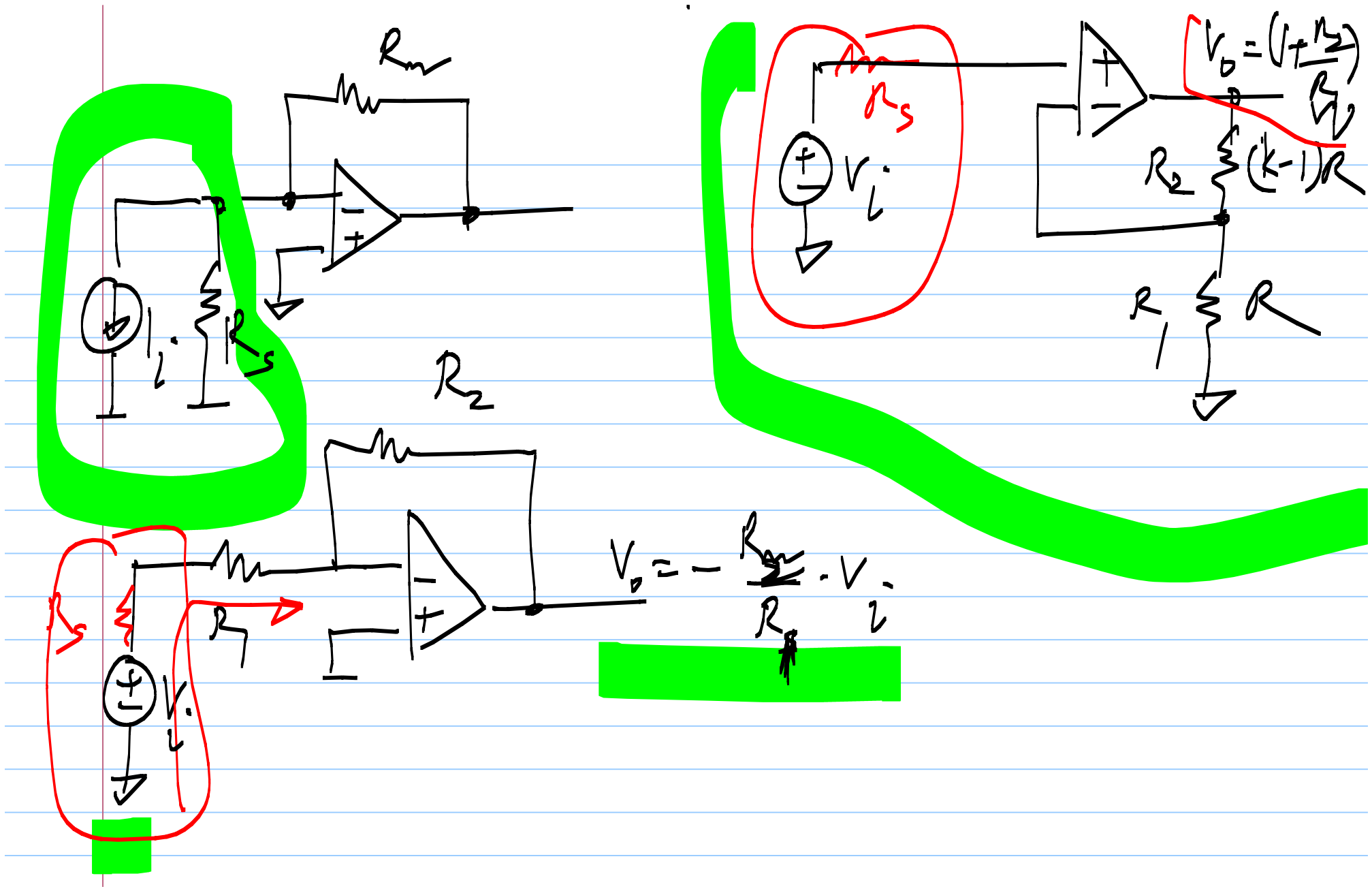
25/1/2017

$V_o = I_i \cdot R_m \Rightarrow V_o - I_i \cdot R_m = 0$



$R_{in} = 0$

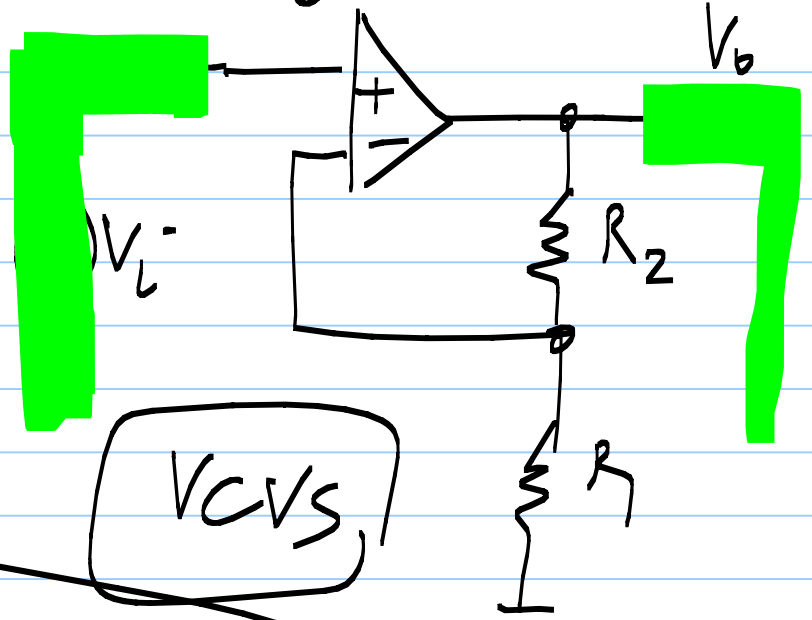
$R_{out} = 0$


R_f
I_i
R_s
R_2
R_1
V_i
$V_o = -\frac{R_f}{R_s} \cdot V_i$
$V_o = (1+\frac{R_2}{R_1})V_i$
$(k-1)R$
R

4
1
+
Vx
0
+1
4
0.Vx

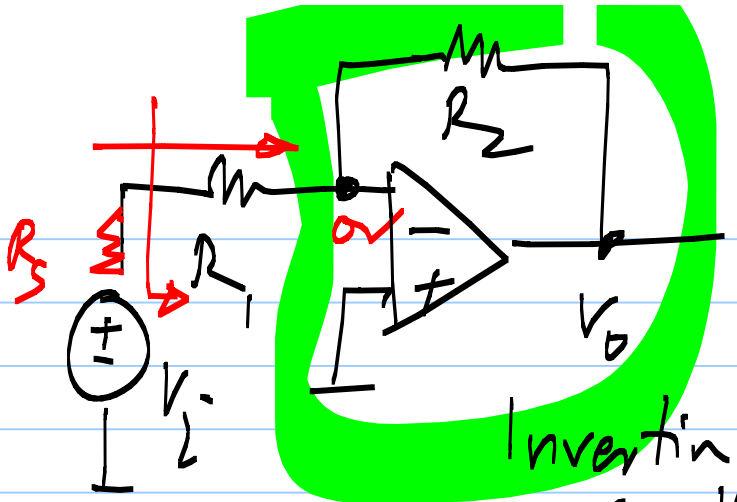
+
1
+
Vx
0
+1
4
0.Vx

Non-inverting amplifier



VCVS

$$\frac{V_o}{V_i} = \left(1 + \frac{R_2}{R_1}\right)$$

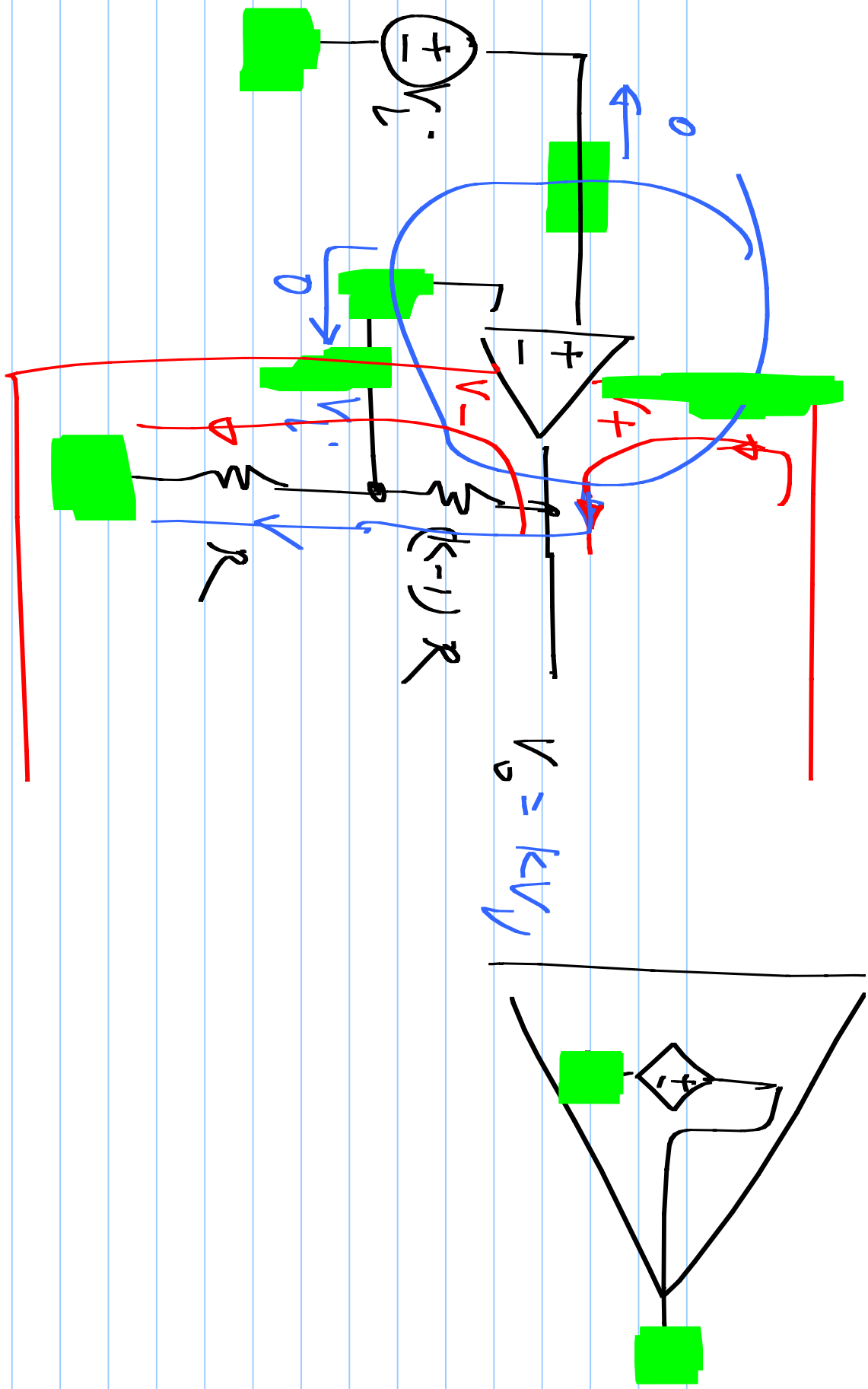


CCVS

Inverting amplifier

$R_3 \ll R_1$

$$\frac{V_o}{V_i} = -\frac{R_2}{R_1}$$


+
-
+
-
+
-
R
(K-1)R
$V_o = KV_i$