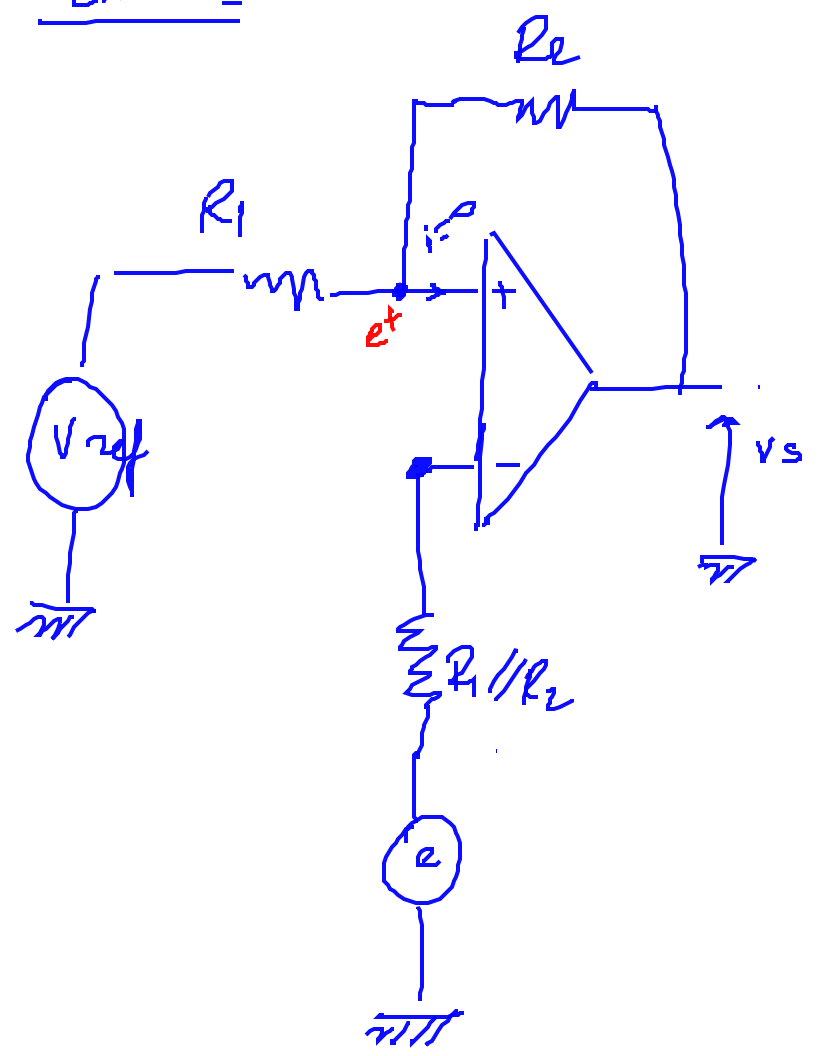
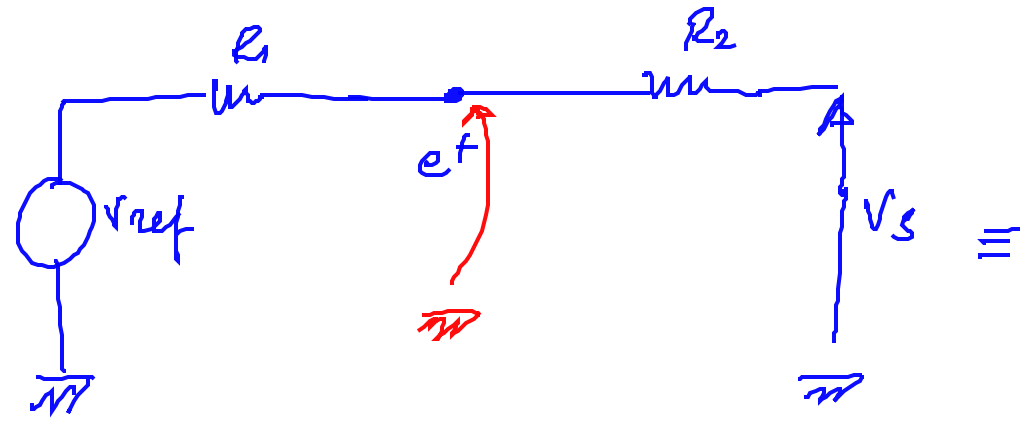


Ex M. 1



1°) Série de basculement
Calcul de e^+



⇒ théorème de superposition

$$e^+ = \frac{R_2}{R_1 + R_2} V_{ref} + \frac{R_1}{R_1 + R_2} V_s = \frac{R_2 V_{ref} + R_1 V_s}{R_1 + R_2}$$

1^{er} cas: si $V_s = V_{cc} \Rightarrow e_1 = \frac{R_2 V_{ref} + V_{cc} R_1}{R_1 + R_2}$

2^{em} cas: si $V_s = -V_{cc} \Rightarrow e_2 = \frac{R_2 V_{ref} - V_{cc} R_1}{R_1 + R_2}$

si $e^+ > e^- \rightarrow v_s$ état haut
si $e^+ < e^- \rightarrow v_s$ état bas

A.N: $e_1 = 5V$ $e_2 = -5V$