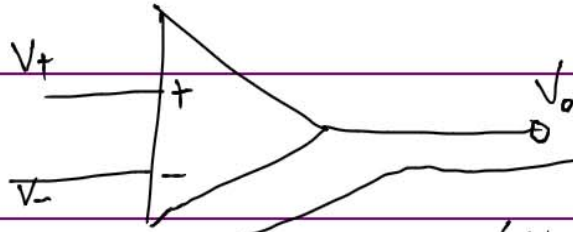


$$F = ma$$



$$V_o = A (V_+ - V_-)$$

open loop gain

① $V_+ = V_-$

② $i_+ = 0$
 $i_- = 0$

Ohm's law: $Ri = \Delta V$

KCL: $\sum_j i_j = 0$

$A \gg 1$

$A \rightarrow \infty$

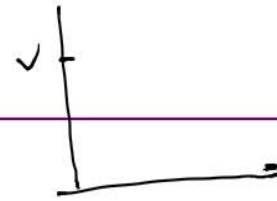
PSPICE
design of circuit

non-inverting amplifier



inverting amplifier

Summing amplifier



log, integration,
differentiation

$$V_o = -\frac{R_2}{R_1} (V_a + V_b)$$

Superposition التراكب

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

$$\vec{v}_s = \vec{v}_1$$