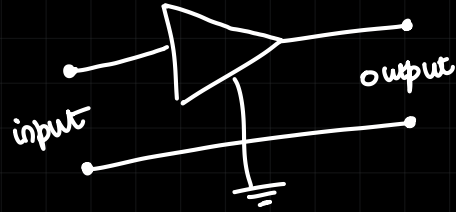
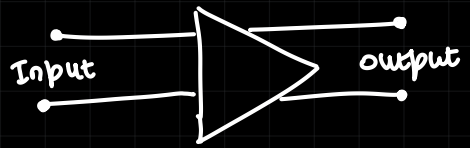
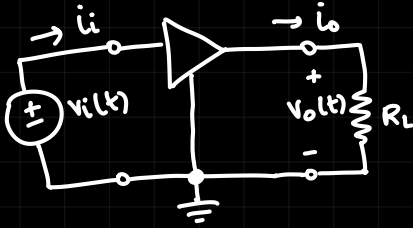


## Revision: Integrated Electronics

### AMPLIFIER:

- ↳ voltage : massive volt gain
- ↳ Power : minimal volt gain  
massive current gain



$$\text{voltage gain: } A_v = \frac{v_o}{v_i}$$

$$\text{current gain: } A_i = \frac{i_o}{i_i}$$

$$\text{Power Gain: } A_p = \frac{v_o i_o}{v_i i_i} = A_v A_i$$

### # GAIN in dB

$$\text{Voltage Gain} = 20 \log_{10} |A_v| \text{ dB}$$

$$\text{Current Gain} = 20 \log_{10} |A_i| \text{ dB}$$

$$\text{Power Gain} = 10 \log_{10} |A_p| \text{ dB}$$

### # Amplifier Power

signals are amplified through DC power supplied to the amplifier