香港中文大學
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CENG4480 Lab2: Op Amp (2)

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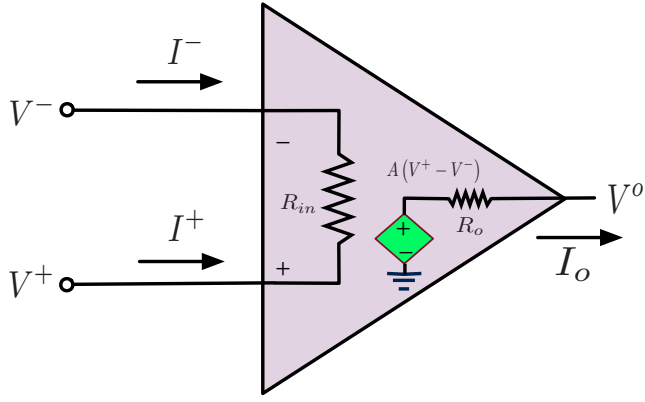
Golden Rule of an Ideal Op Amp

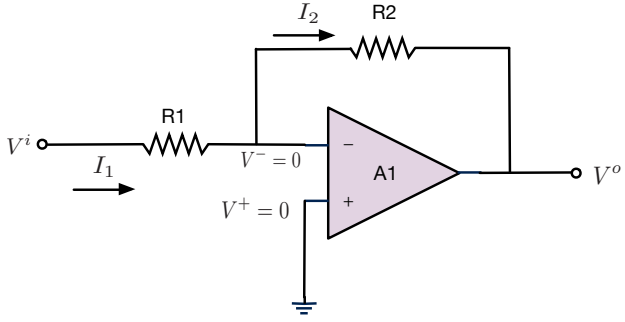
- R_{in} **goes infinity**
- $I^+ = I^- = 0$



An Ideal Op Amp.

Golden Rule of an Ideal Op Amp with Negative Feedback

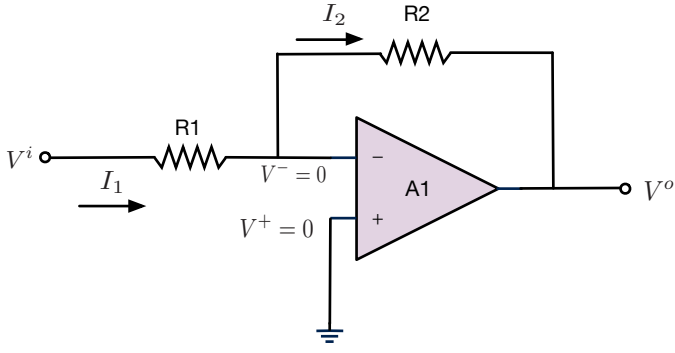
- $V^+ = V^-$



An Inverting Amplifier.

Analysis on Circuit with An Ideal Op Amp

- $I^+ = I^- = 0$
- $V^+ = V^-$



$$I_- = 0$$

$$I_1 = I_2 + I_- = I_2$$

$$I_1 = \frac{V^i - V^-}{R_1} = \frac{V^i}{R_1}$$

$$I_2 = \frac{V^- - V^o}{R_2} = \frac{-V^o}{R_2}$$

$$G = \frac{V^o}{V^i} = \frac{-R_2}{R_1}$$

Analysis on Inverting Amplifier.

Suggestions for Experiments

- ☺ Be careful about the offset value.
- ☺ Use digital multimeter to obtain resistances, capacitances etc.