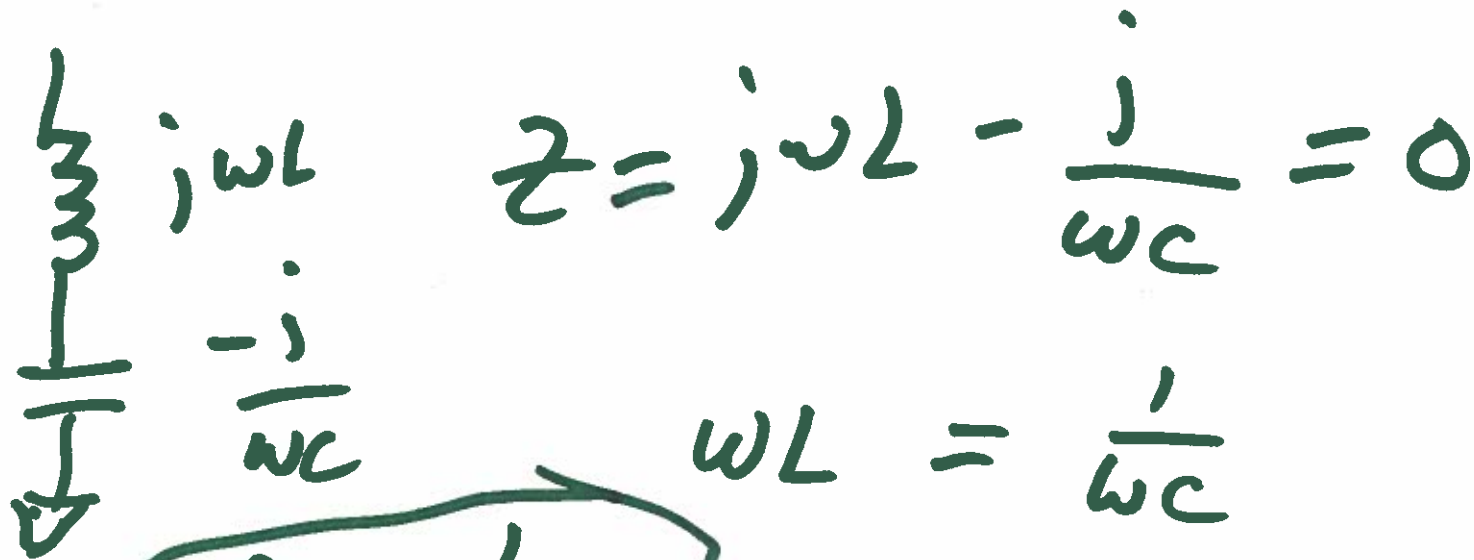


EE 220

Circuits 1

Dec. 2, 2019

Lecture 26



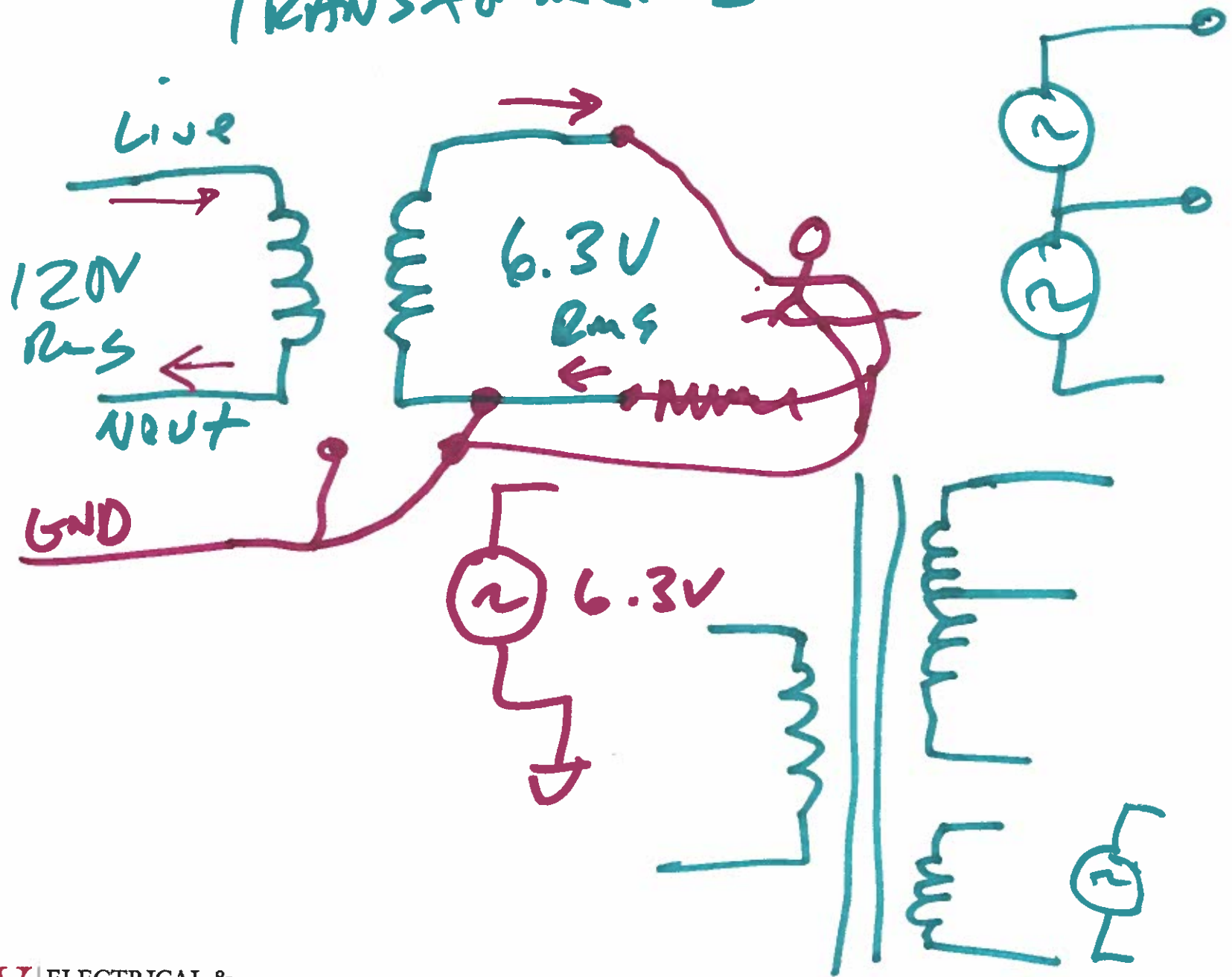
$$\omega L = \frac{1}{\omega C}$$

$$f = \frac{1}{2\pi\sqrt{LC}}$$

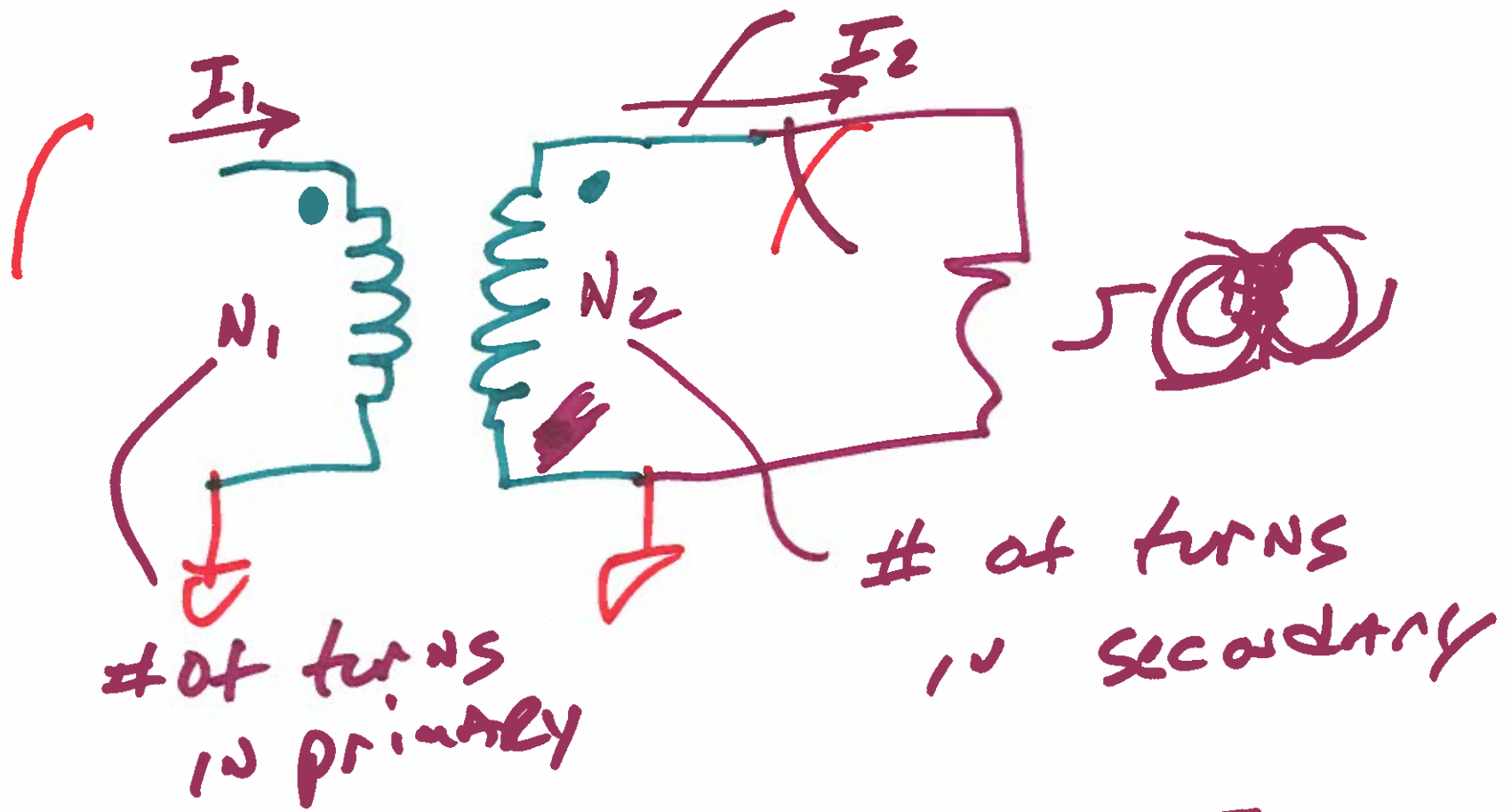
$$\omega^2 = \frac{1}{LC}$$

1)

# TRANSFORMERS

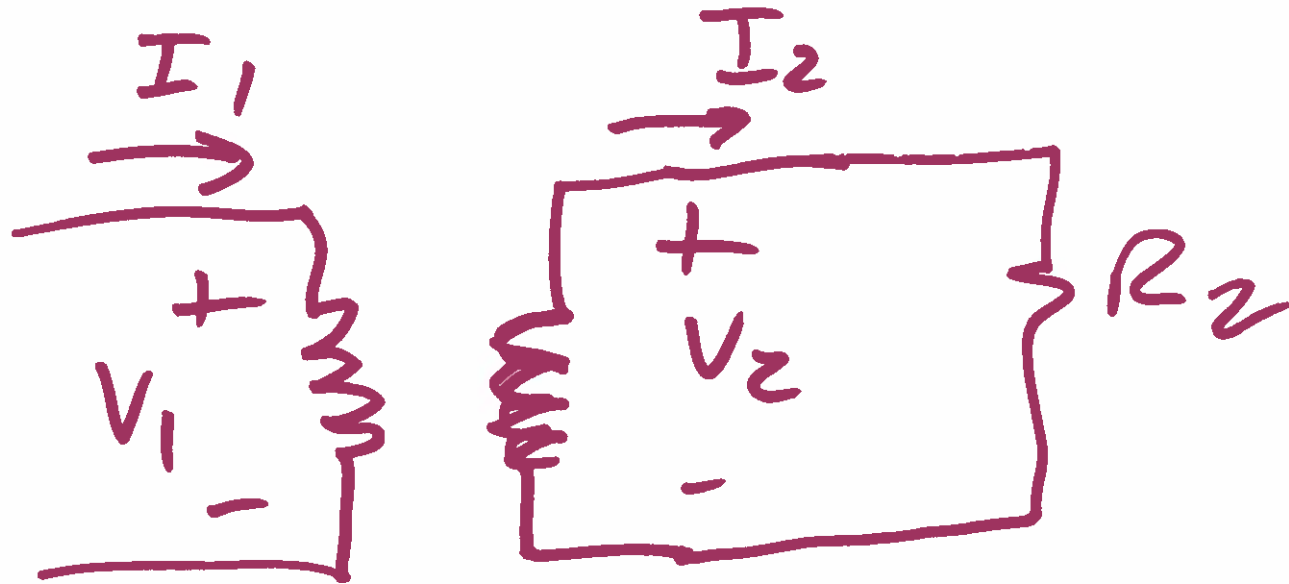


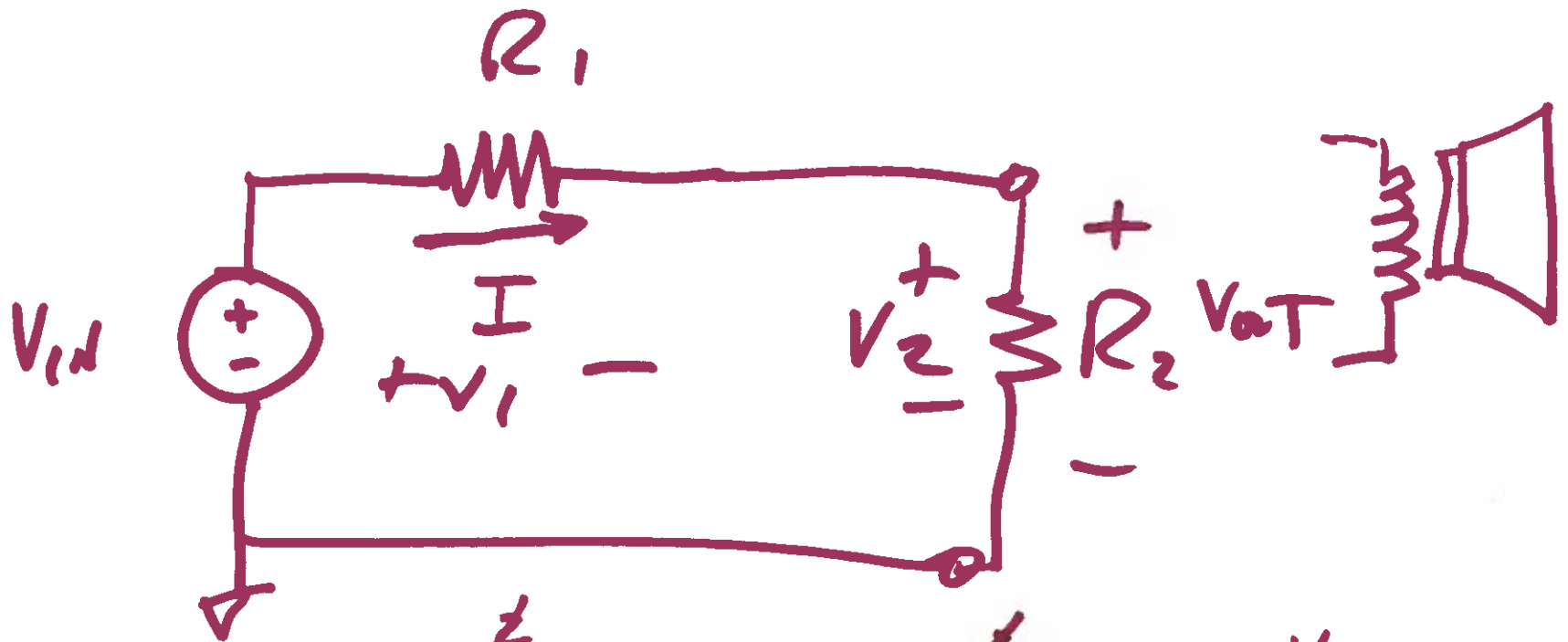
2)



$$\frac{I_2}{I_1} = \frac{V_1}{V_2} = \frac{N_1}{N_2} = \sqrt{\frac{L_1}{L_2}}$$

$$\frac{V_1}{I_1} = \frac{V_2}{I_2} \cdot \frac{N_1^2}{N_2^2}$$





$$= V_{in} \cdot I = I \cdot R_2 + I \cdot R_1, \quad \frac{V_{in}}{I} = R_2 + R_1$$

$$V_{in} = V_1 + V_2$$

$$I \cdot R_2 + I R_1$$

$$R_1 = \frac{V_{in}}{I} - R_2$$

$$R_1 = R_2$$

5)