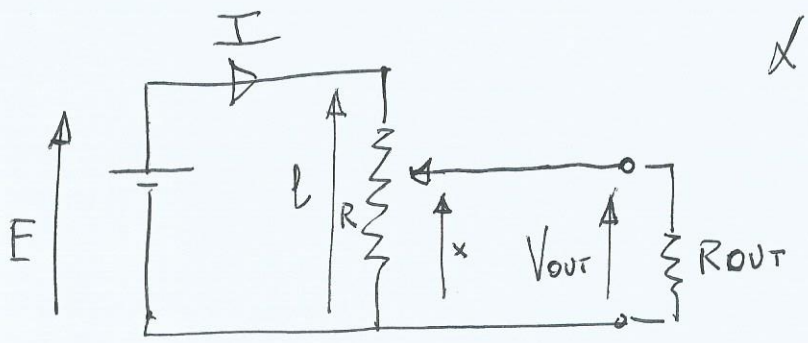

$$\alpha = \frac{x}{l_0}$$

CON R_{OUT} COLLEGATA

$$V_{OUT} = \alpha \frac{R_{OUT}/R}{-\alpha^2 + \alpha + R_{OUT}/R} \cdot E$$

A VUOTO

$$V_{OUT} = \alpha E$$

$$V_{OUT} = R_{PARALLELO} \times I \qquad \alpha = \frac{x}{l}$$

$$R_{PARALLELO} = \frac{R_{OUT} \times R\cdot\alpha}{R_{OUT} + R\cdot\alpha}$$

$$I = \frac{E}{(R - \alpha R) + \left(\frac{R_{OUT} \times R\cdot\alpha}{R_{OUT} + R\cdot\alpha}\right)}$$

$$V_{OUT} = \frac{R_0 \times R\cdot\alpha}{R_0 + R\cdot\alpha} \times \frac{E}{(R - \alpha R) + \left(\frac{R_0 \times R\cdot\alpha}{R_0 + R\cdot\alpha}\right)}$$

$$= \frac{R_0 \times R\alpha \cdot E}{R_0 + R\cdot\alpha \cdot \frac{(R_0 + R\cdot\alpha)(R - \alpha R) + R_0 \times R\cdot\alpha}{R_0 + R\cdot\alpha}}$$

$$= \frac{R_0 \cdot R\cdot\alpha \cdot E}{R_0 R - \alpha R R_0 + \alpha R^2 - \alpha^2 R^2 + \alpha R R_0}$$

$$= \alpha \cdot \frac{R^2}{R^2} \cdot \frac{\frac{R_{OUT}}{R} E}{-\alpha^2 + \alpha + \frac{R_{OUT}}{R}}$$