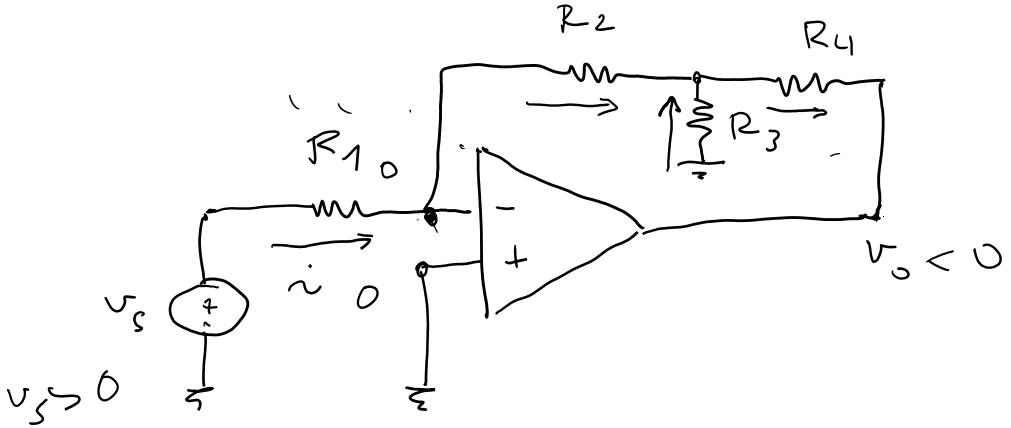
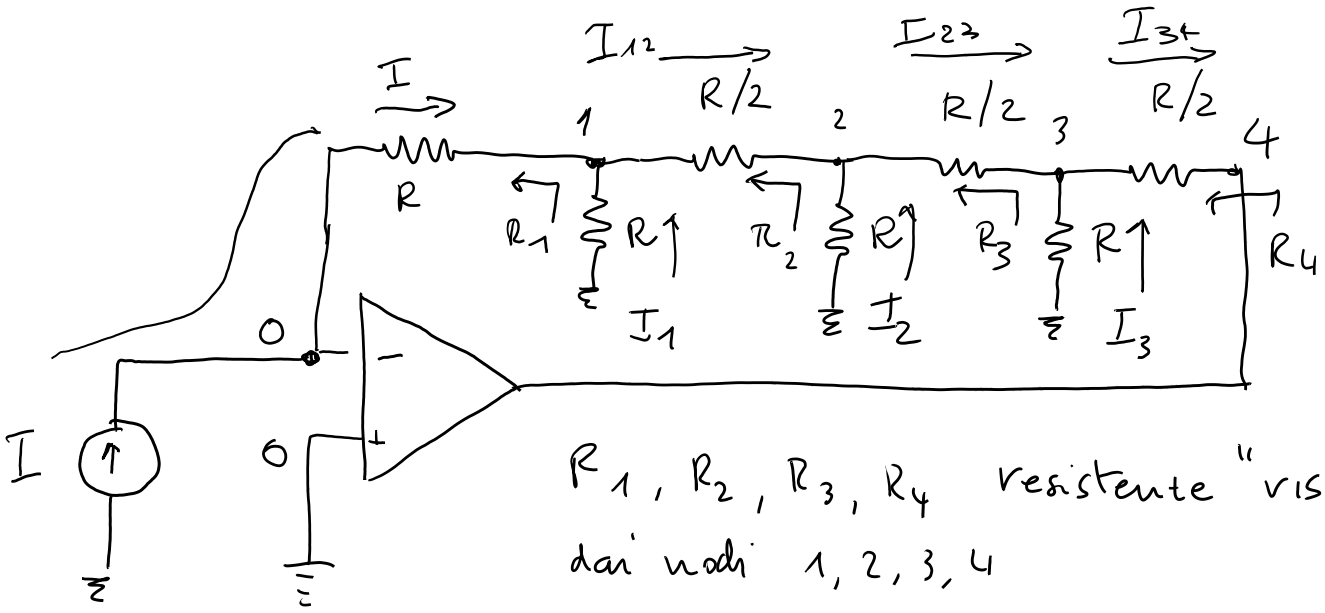


A_V indip. $R_{in} = R_1$

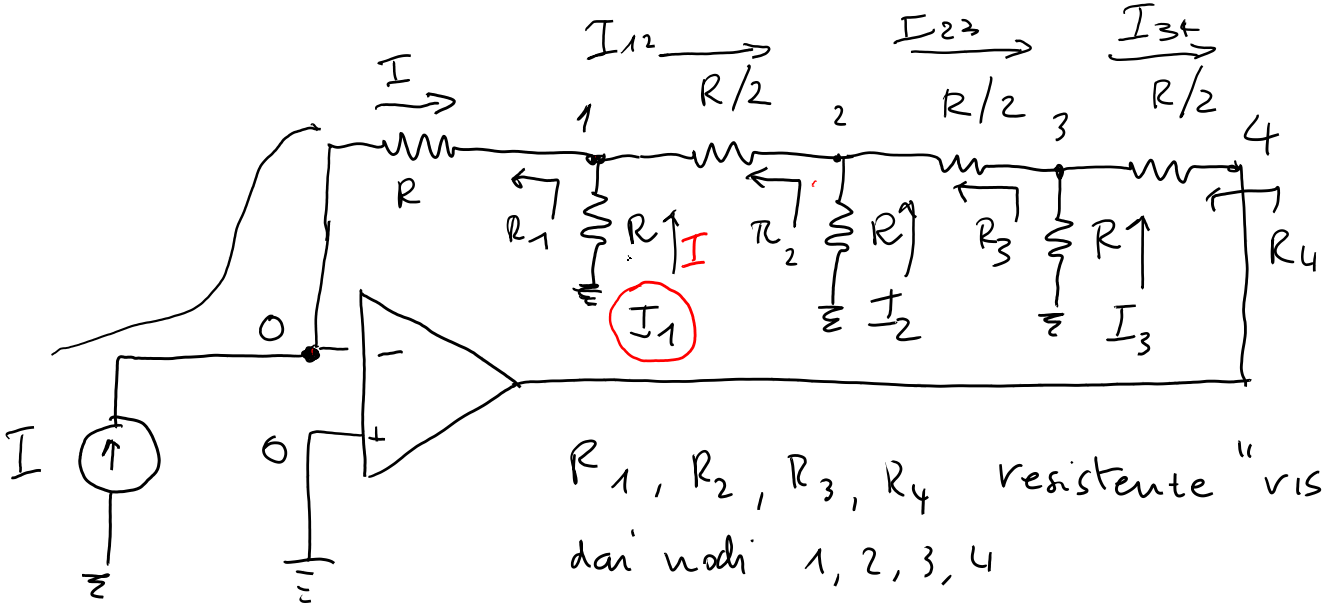
$A_V = -\frac{R_2}{R_1}$ (senza T)



R_1, R_2, R_3, R_4 resistenze "viste" a valle dai nodi 1, 2, 3, 4

a) R_1, R_2, R_3, R_4

b) v_1, v_2, v_3, v_4 I_{12} I_{23}, I_{34} .



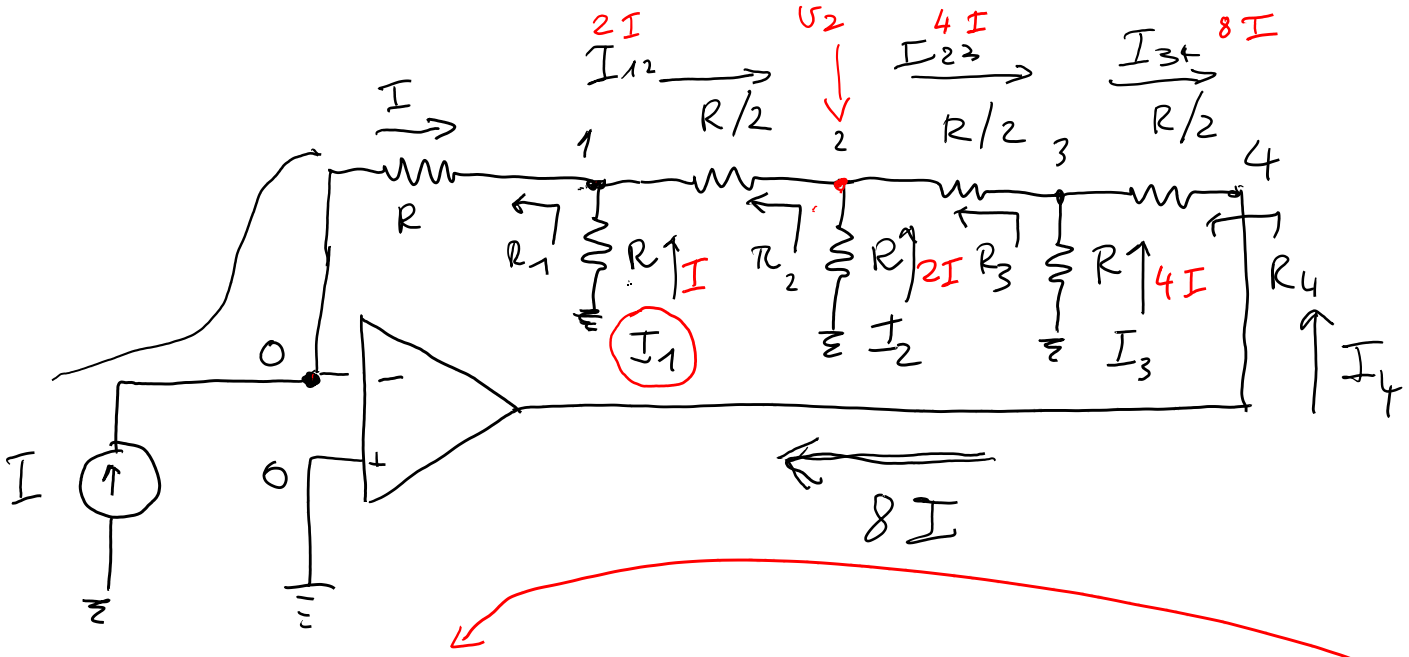
R_1, R_2, R_3, R_4 resistenze "viste" a valle dai nodi 1, 2, 3, 4

$$R_1 = R \qquad R_2 = \frac{R}{2} + R/\!/R = R \qquad R_3 = R_{2_\ell}/\!/R_2 + \frac{R}{2} = R/\!/R + \frac{R}{2} = R$$

$$R_4 = R_3/\!/R + \frac{R}{2} = R$$

$$I_1 = -\frac{v_1}{R} \; ; \; v_1 = -IR \qquad I_1 = I \qquad I_{12} = 2I$$

$$I_{23} = I_{12} + I_2$$



$I_{23} = I_{12} + I_2 = 2I + 2I = 4I$

$v_2 = v_1 - I_{12} \cdot \frac{R}{2} = -IR - 2I\frac{R}{2} = -2IR \Rightarrow I_2 = \frac{2IR}{R} = 2I$

$v_3 = v_2 - I_{23}\frac{R}{2} = -2IR - 4I\frac{R}{2} = -4IR$

$I_3 = \frac{0 - v_3}{R} = -\frac{(-4IR)}{R} = 4I$

$I_3 = 4I \qquad I_{34} = I_{23} + I_3 = 8I;$

$v_4 = v_3 - I_{34}\frac{R}{2} = -4IR - 8I\cdot\frac{R}{2} = -8IR$

$I_4 = -I_{34} = -8I$