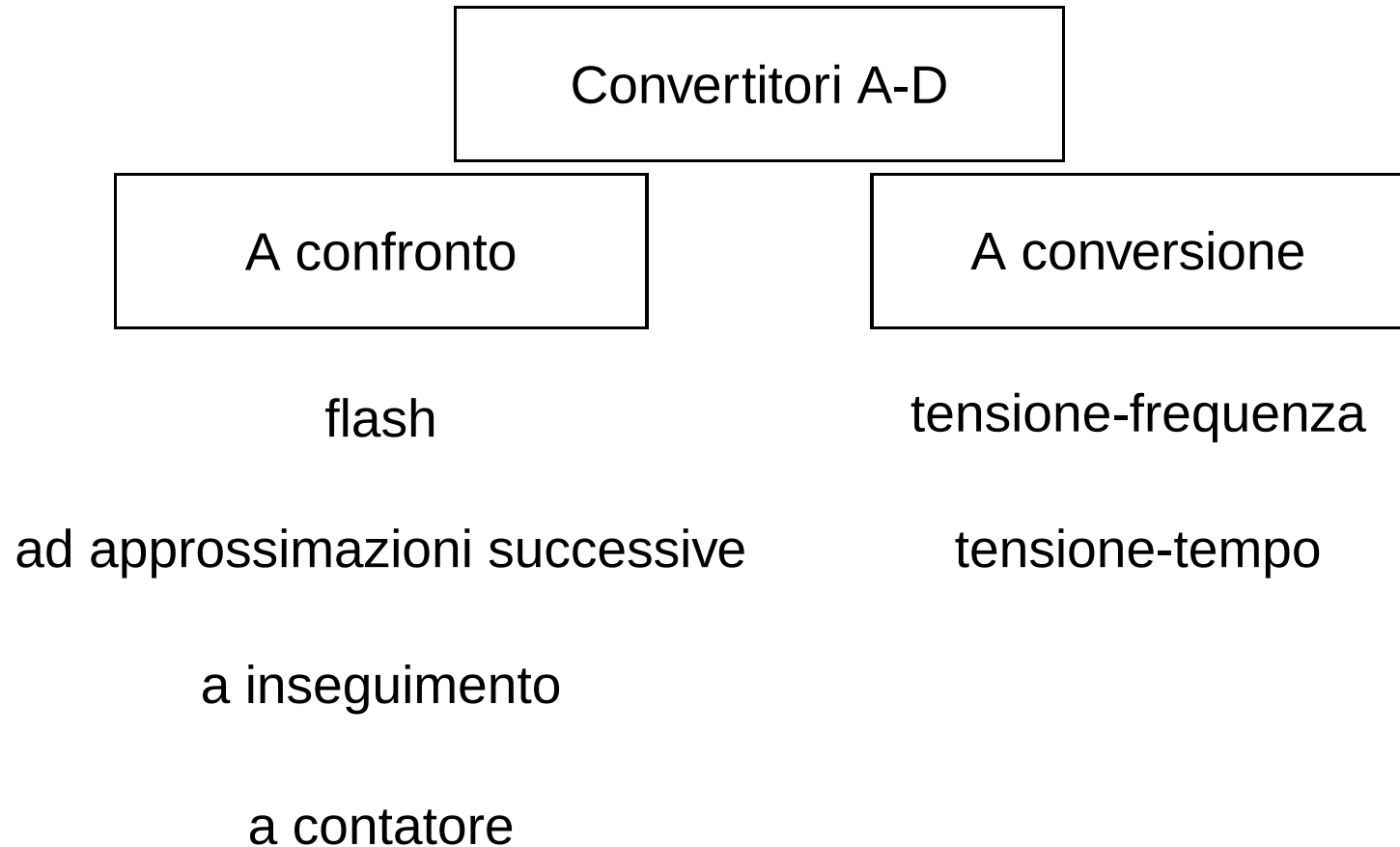


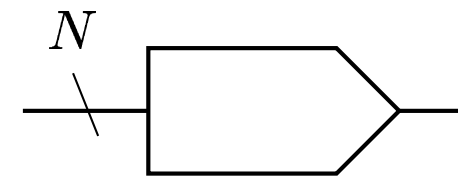
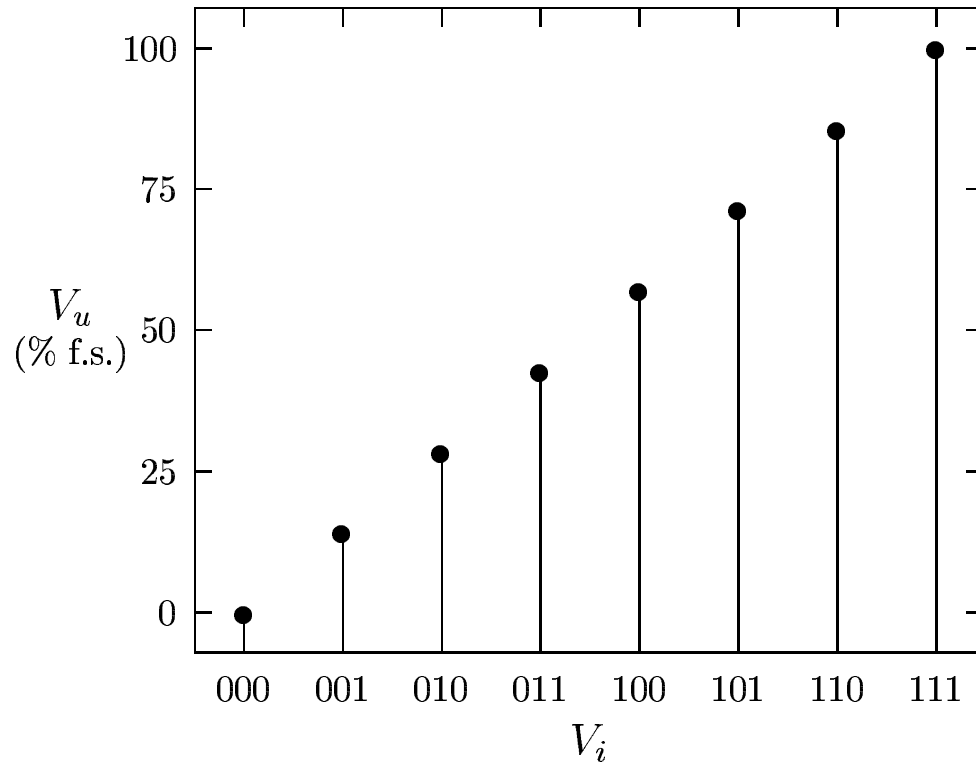
Convertitori A-D

Classificazione:

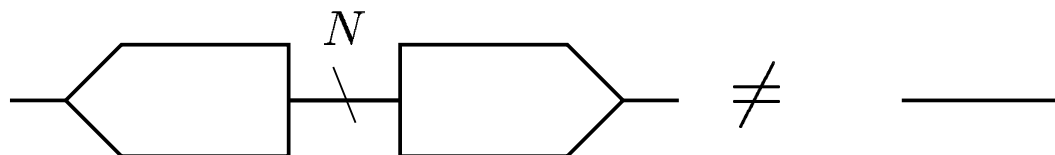


Conversione Digitale-Analogico

È concettualmente l'operazione inversa rispetto alla conversione A-D

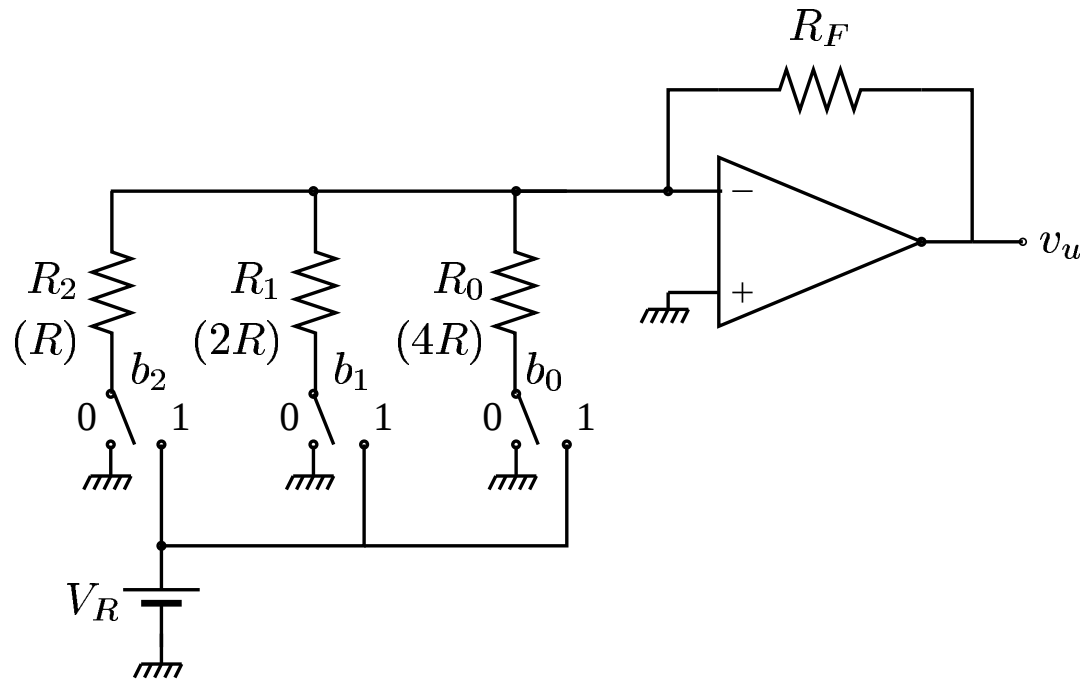


$$V_U = \frac{V_{REF}}{2^N} (b_{N-1}2^{N-1} + b_{N-2}2^{N-2} + \dots + b_12 + b_0), \quad 0 \leq V_U \leq V_{REF} \frac{2^N - 1}{2^N}$$



Conversione D-A

Convertitore a resistenze pesate



$$\begin{aligned} V_U &= -V_R \left(b_2 \frac{R_F}{R_2} + b_1 \frac{R_F}{R_1} + b_0 \frac{R_F}{R_0} \right) = -V_R \frac{R_F}{R} \left(b_2 + b_1 \frac{1}{2} + b_0 \frac{1}{4} \right) \\ &= -V_R \frac{R_F}{4R} (4b_2 + 2b_1 + b_0) \quad (\text{ampl. invertente}) \end{aligned}$$

Conversione D-A

Convertitore *ladder* (o R-2R)

