



Algebra Booleana

Realizzazione elettrica delle operazioni

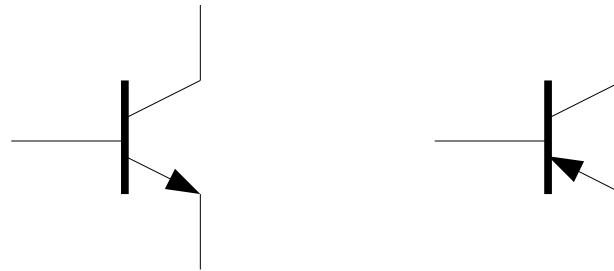
Corso di Abilità Informatiche
Laurea in Fisica

prof. Corrado Santoro

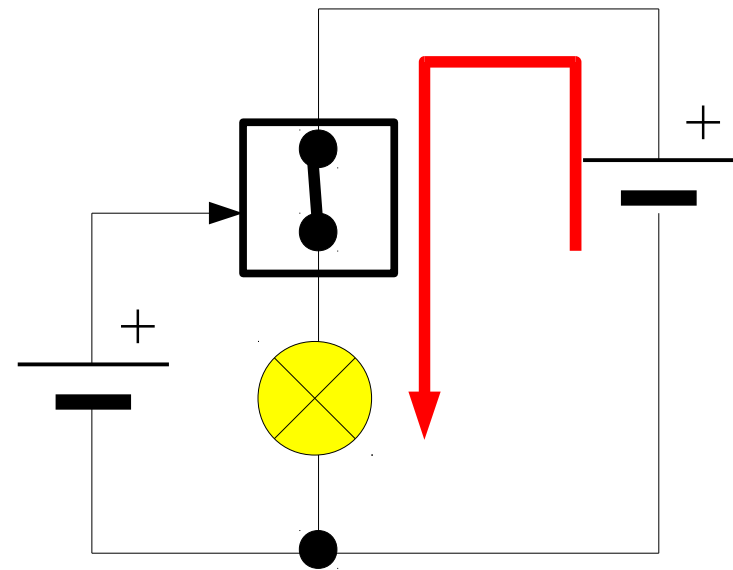
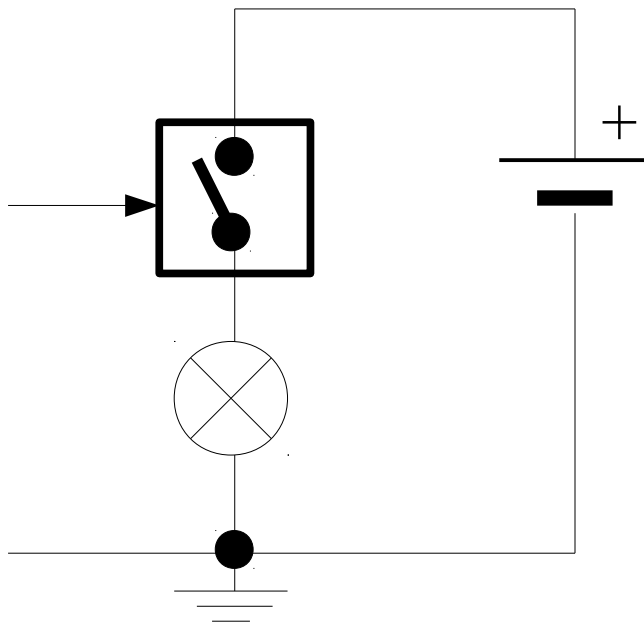
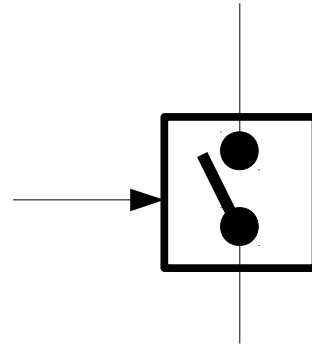
Il Transistor



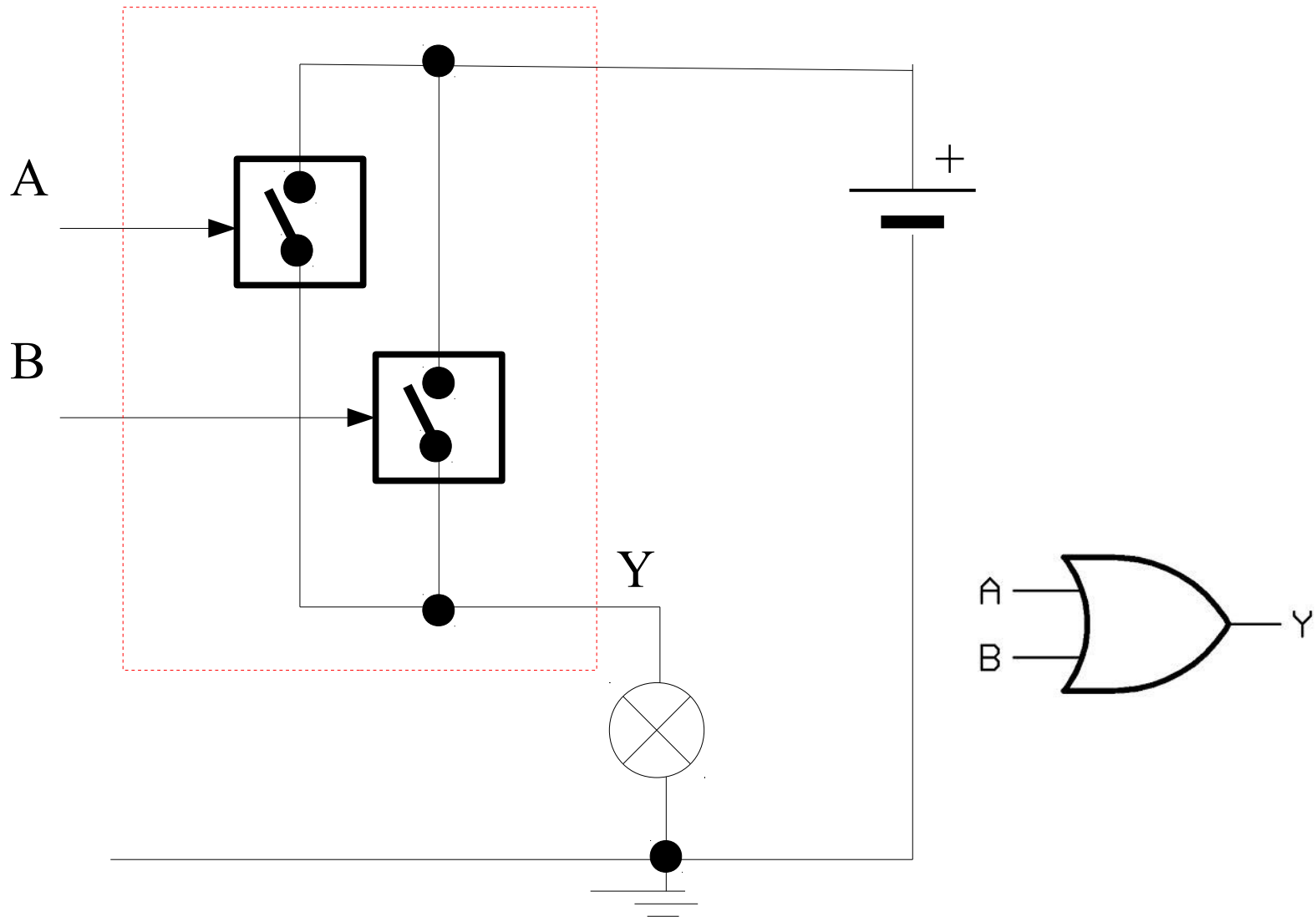
- E' il componente base dei circuiti integrati dei calcolatori
- E' stato realizzato per la prima volta nel 1947 nei Bell Labs da Walter Brattain, John Bardeen, William Shockley (Nobel per la Fisica nel 1956)
- E' composto da pezzi di silicio opportunamente trattati
- Agisce, in generale, come "amplificatore di segnale"
- Ma funziona anche come "interruttore elettronico"



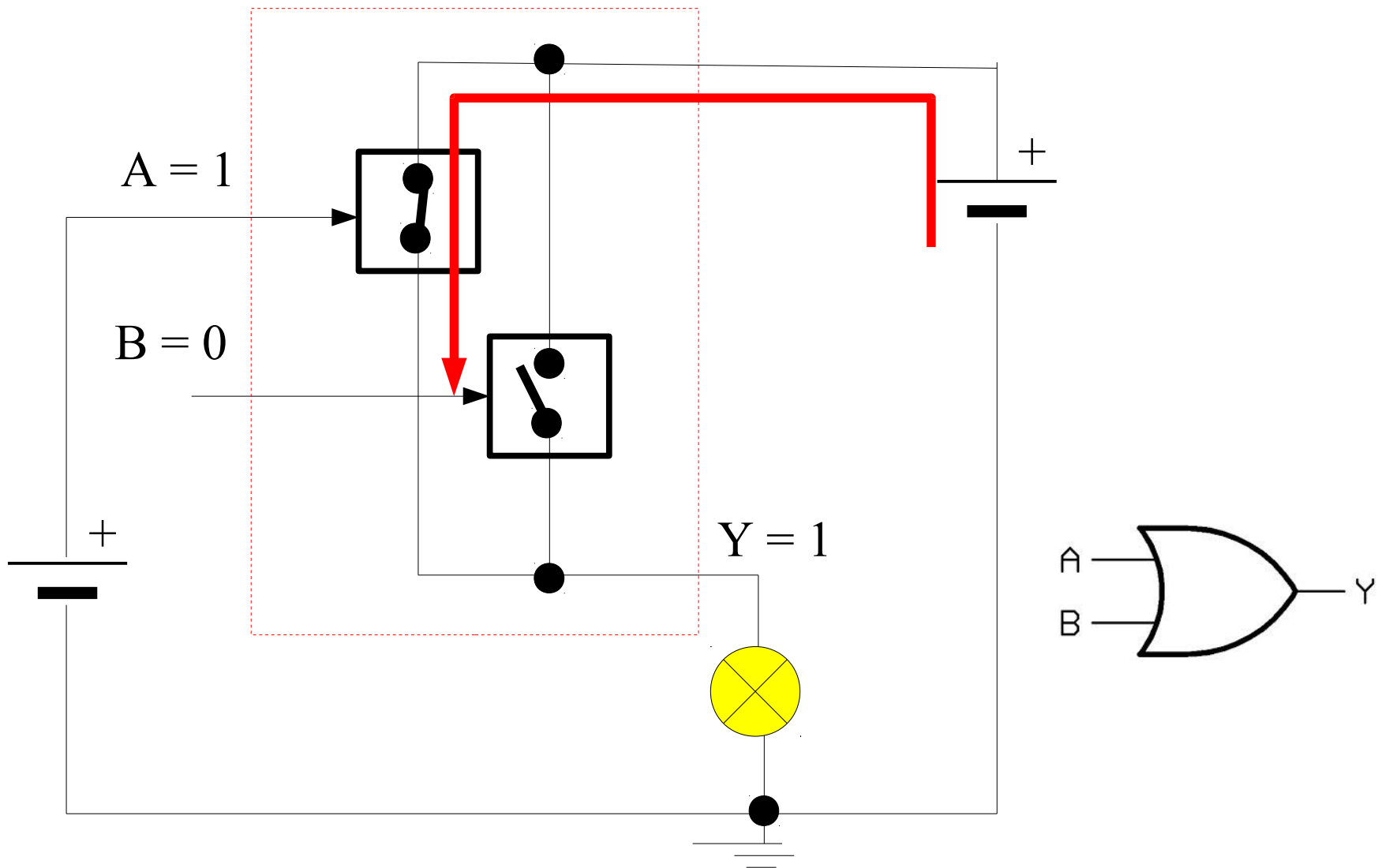
Il Transistor come "interruttore"



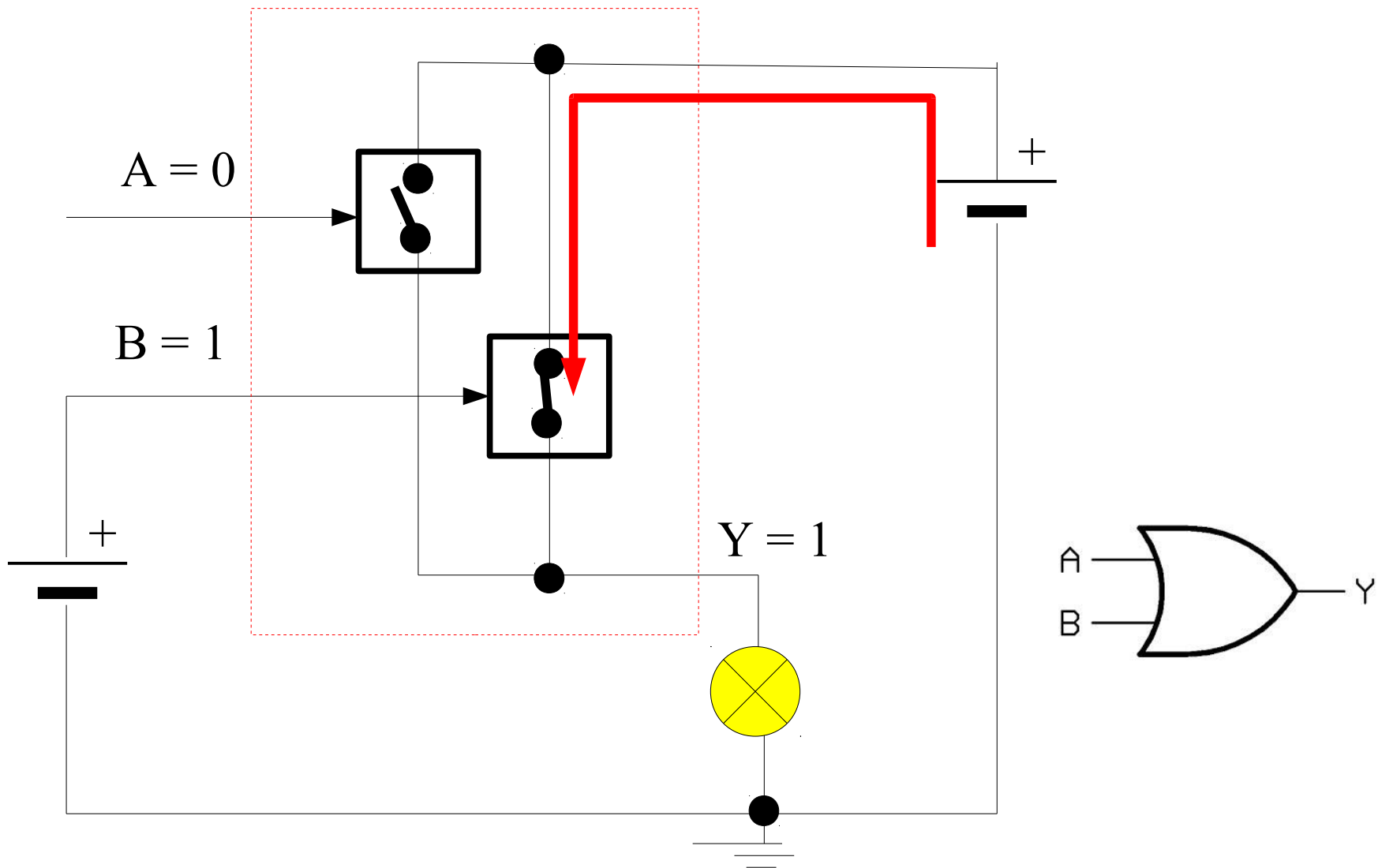
La funzione OR



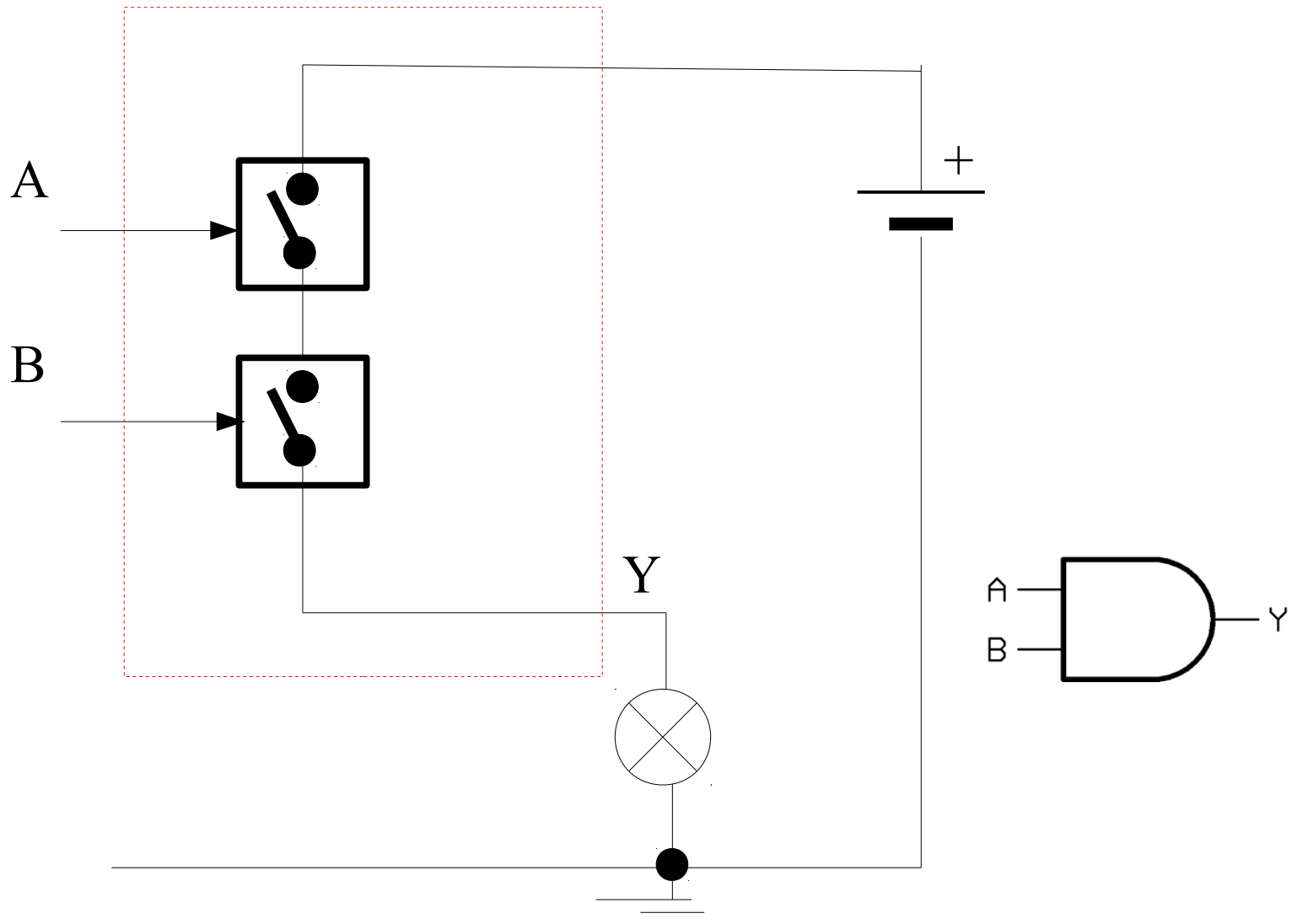
La funzione OR



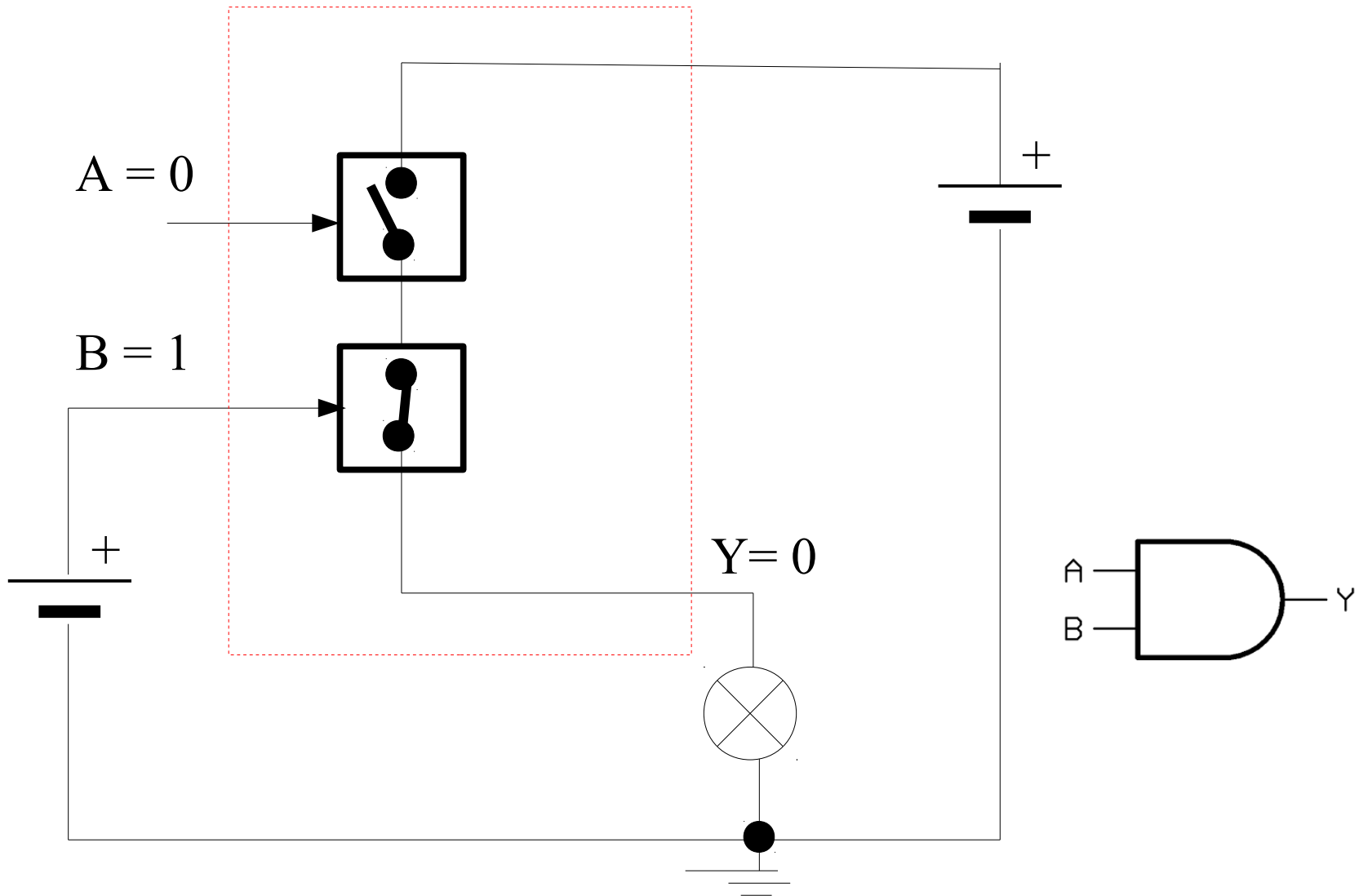
La funzione OR



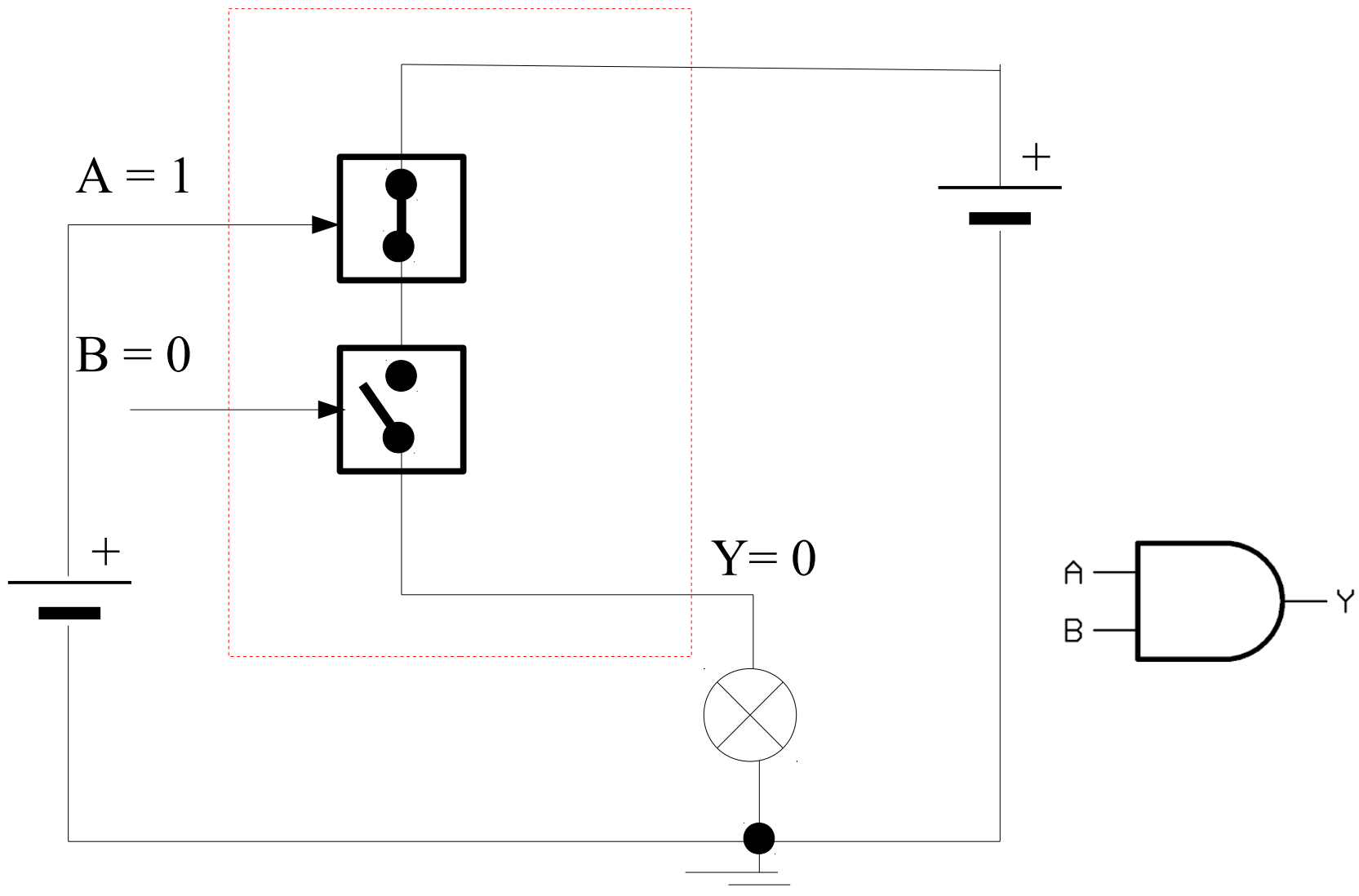
La funzione AND



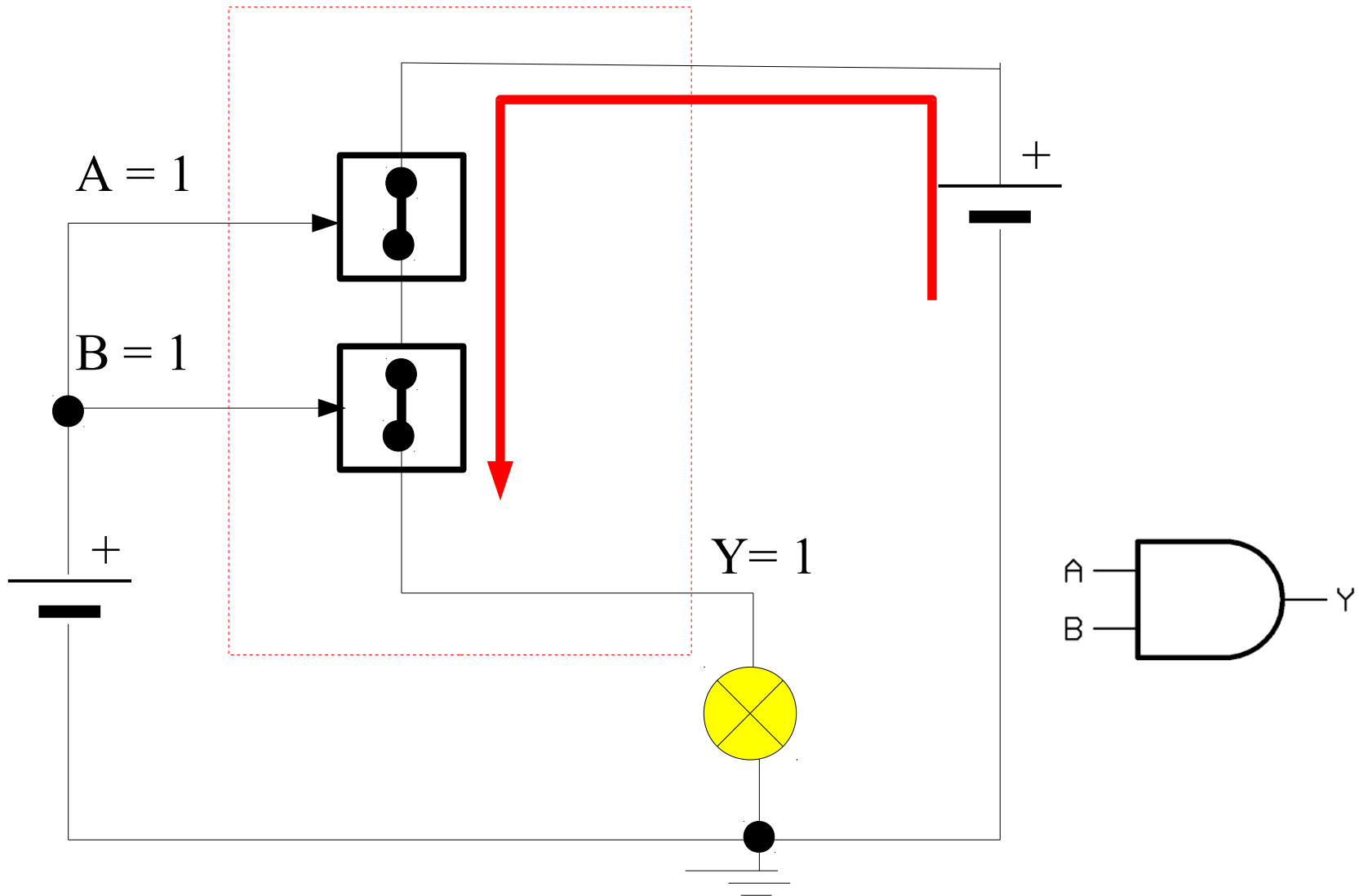
La funzione AND



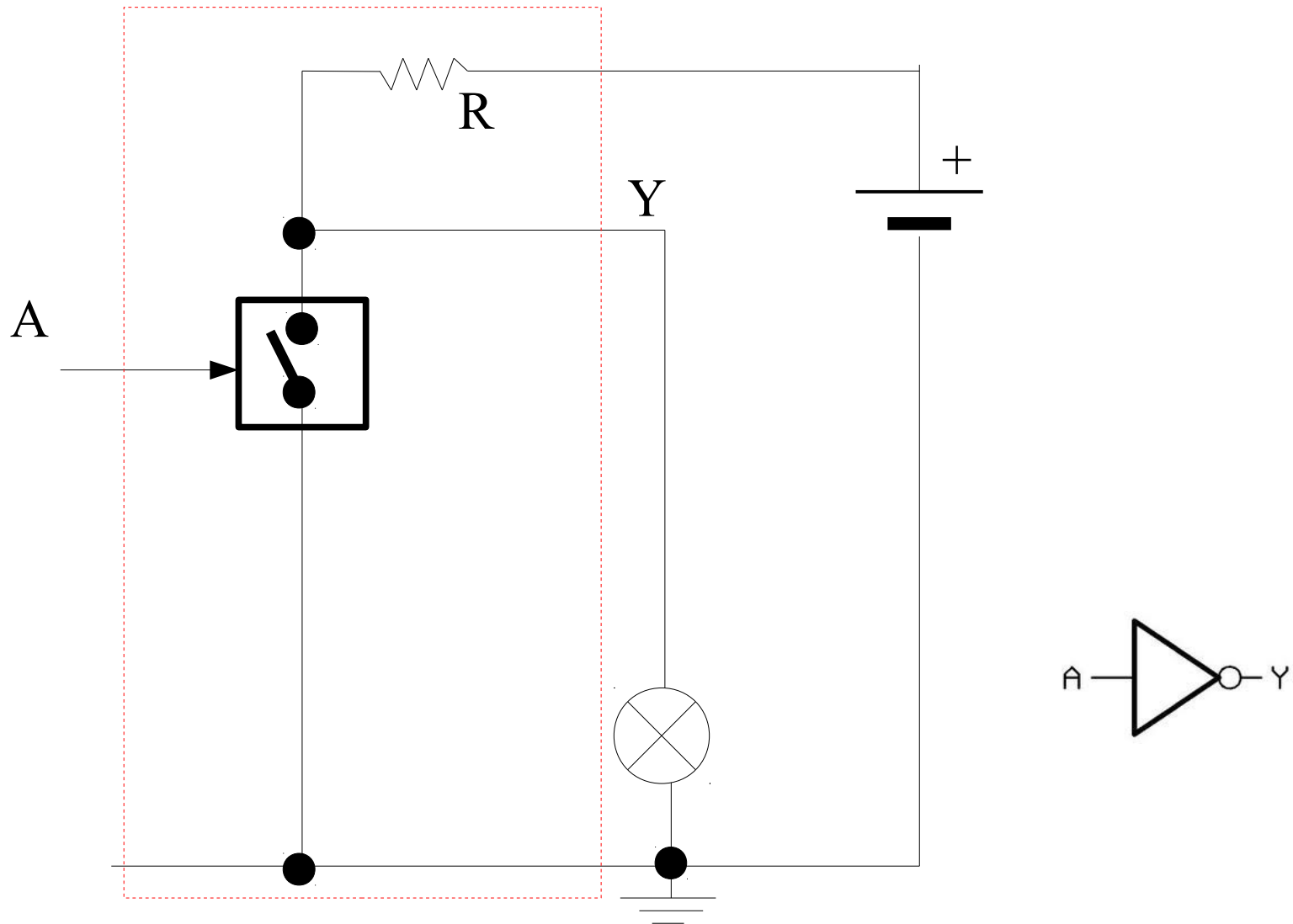
La funzione AND



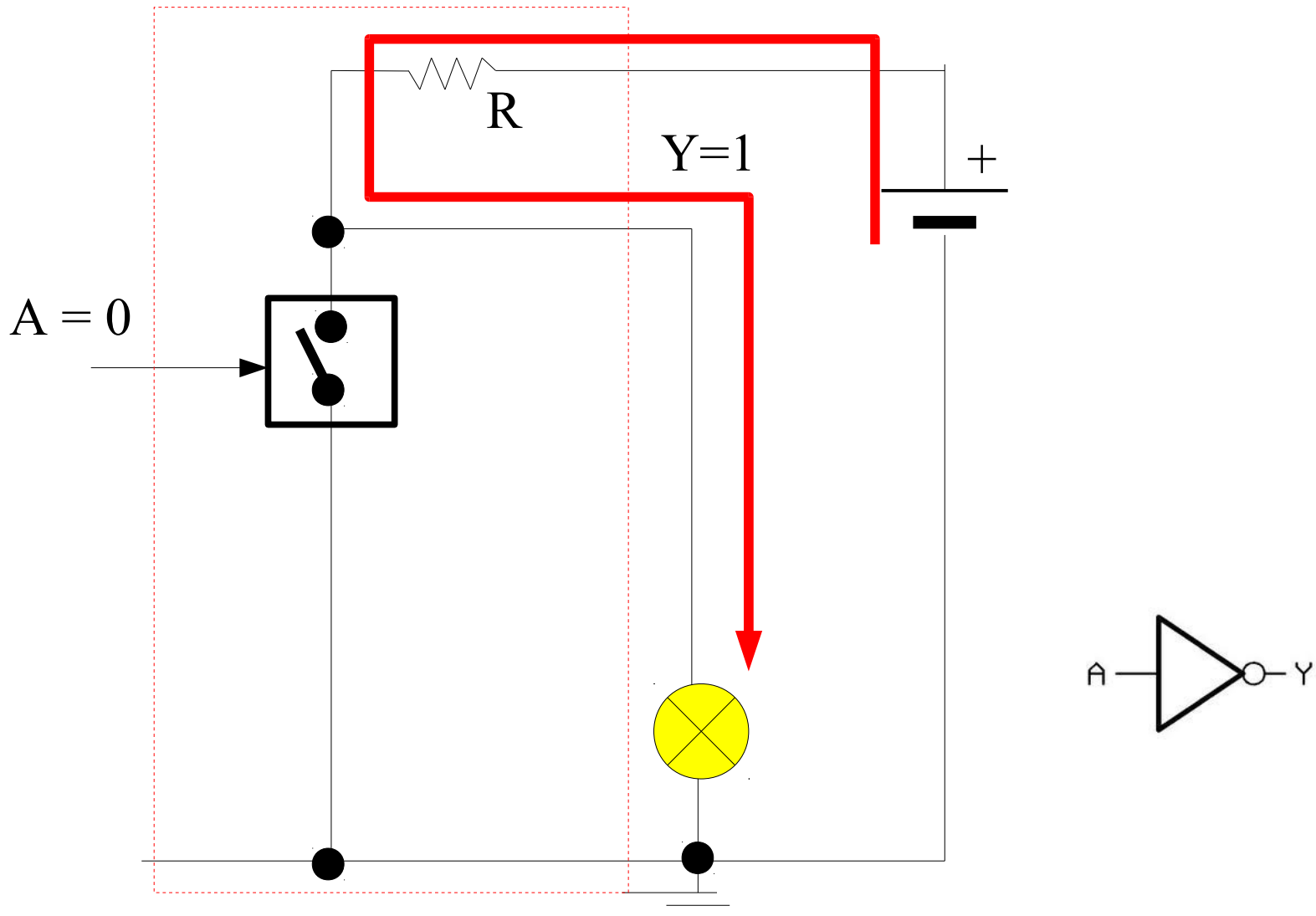
La funzione AND



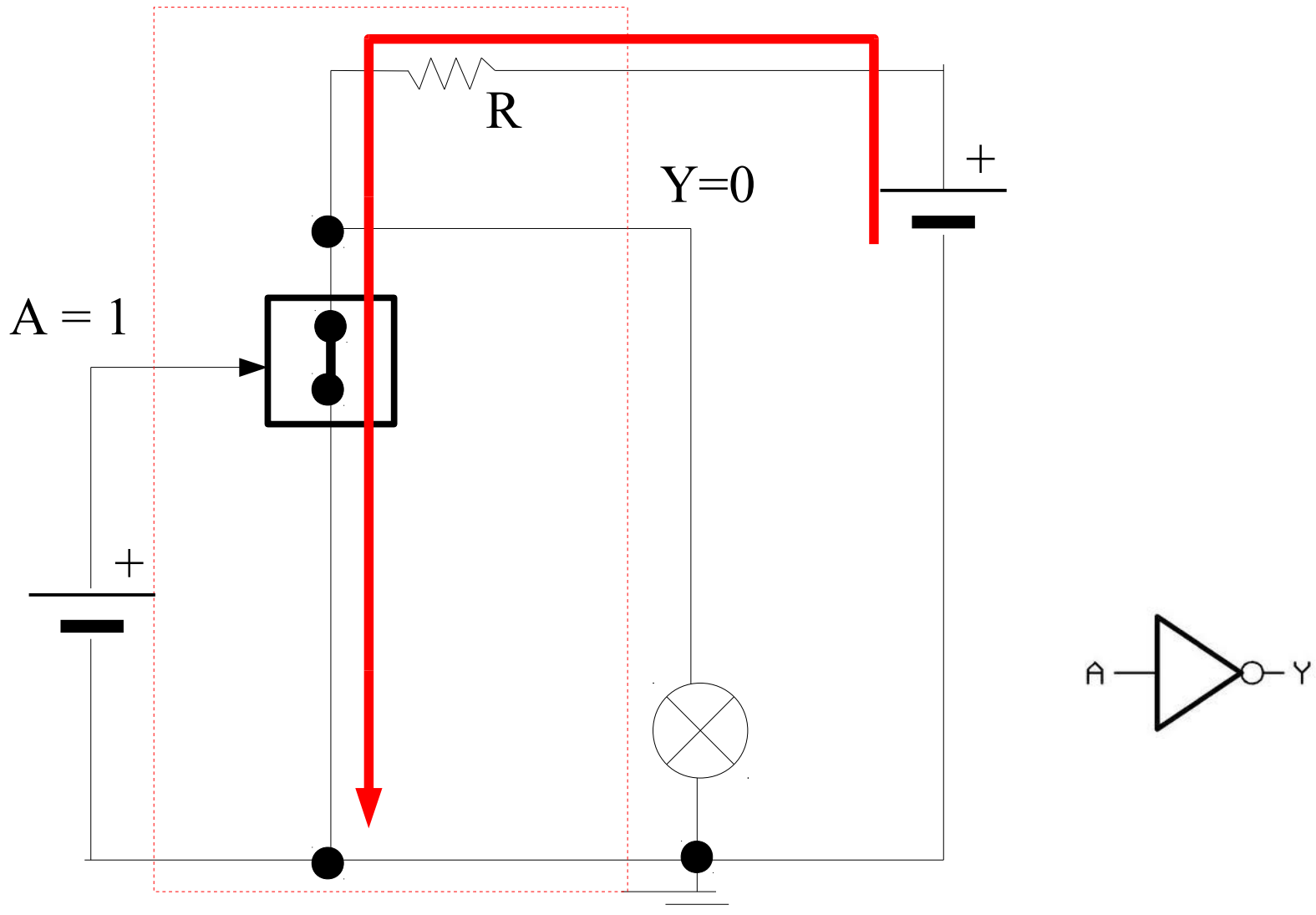
La funzione NOT



La funzione NOT



La funzione NOT



Un esempio di combinazione: AND + NOT

