Esempio 5.1

Si considerino i linguaggi:

$$L_1 = \{a^{2n} \mid n \geq 0\} \qquad L_2 = \{b, cc\}$$

$$L_1 \cdot L_2 = \{b, cc, a^2b, a^2cc, a^4b, a^4cc, ...\}$$

$$L_2 \cdot L_1 = \{b, cc, ba^2, cca^2, ba^4, cca^4, ...\}$$

Dunque:

$$L_2 \subset L_1 \cdot L_2 \qquad \text{e} \qquad L_2 \subset L_2 \cdot L_1$$

mentre:

$$L_1 \not\subseteq L_1 \cdot L_2 \qquad \text{e} \qquad L_1 \not\subseteq L_2 \cdot L_1$$

$$L_1 \cup L_2 = L_2 \cup L_1 = \{\lambda, b, cc, a^2, a^4, a^6, ...\}$$

$$L_2^{\,*} = \{\lambda, b, cc, bb, bcc, ccb, bbb, cccc, ...\}$$

$$L_1^{\,*} = \{\lambda, a^2, a^4, a^6, ...\} = L_1$$