

$$\odot P \leftrightarrow q \Leftrightarrow (\sim P \vee q) \wedge (P \vee \sim q)$$

$$7) \text{ I) } (P \wedge \sim P) \downarrow (q \wedge \sim q)$$

$$(\sim(P \wedge \sim P)) \wedge (\sim(q \wedge \sim q))$$

$$(\sim C) \wedge (\sim C) \quad \underline{\underline{\text{FNC}}}$$

FORMA NORMAL CONJUNTIVA

- Conectivos \sim , \wedge , \vee
- \sim , $(\sim \sim)$ NÃO PODE!

$$K) (P \uparrow q) \leftrightarrow P$$

$$= (\sim P \vee \sim q) \leftrightarrow P$$

$$= \sim(P \wedge q) \leftrightarrow P$$

$$= [(P \wedge q) \vee P] \wedge [\sim(P \wedge q) \vee \sim P]$$

$$= [P \vee (P \wedge q)] \wedge [\sim P \vee (\sim(P \wedge q))]$$

$$= [(P \vee P) \wedge (P \vee q)] \wedge [\sim P \vee (\sim P \vee \sim q)]$$

$$= [P \wedge (P \vee q)] \wedge [(\sim P \vee \sim P) \vee \sim q]$$

$$= [P \wedge (P \vee q)] \wedge [(\sim P \vee \sim q)]$$

$$= [P \wedge (P \vee q)] \wedge [(\sim P \vee \sim q)]$$

$$= [P \wedge (P \vee q)] \wedge [\sim (P \wedge q)]$$

FNC