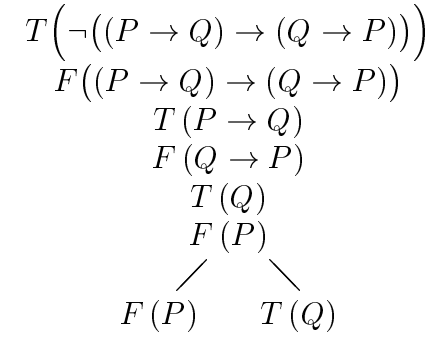
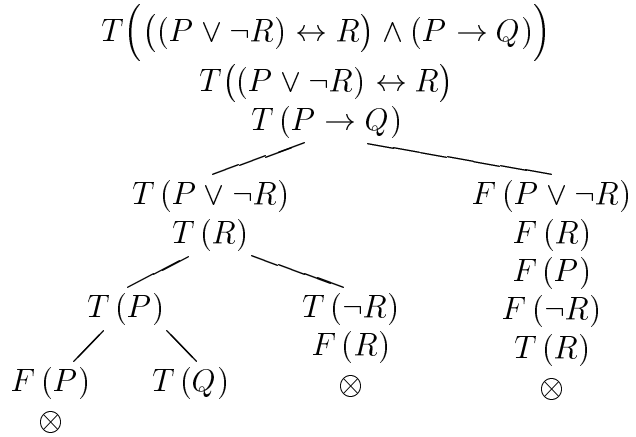
Tik-79.146 **Kevät 1999**
Logiikka tietotekniikassa: erityiskysymyksiä I
Laskuharjoitus 1
Ratkaisut

1. a)



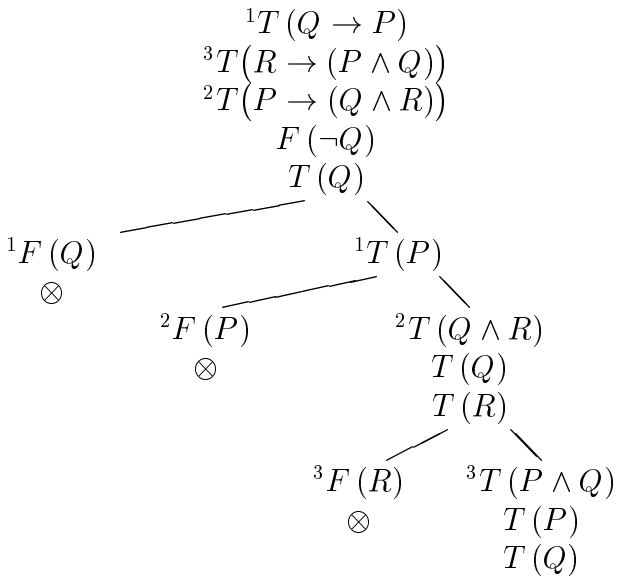
$M = \{Q\}$

b)



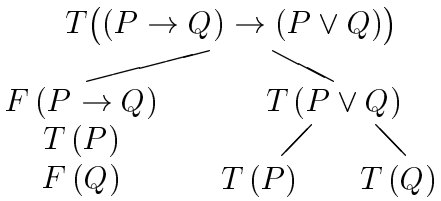
$M = \{P, Q, R\}$

2.



Vastamalli: $M = \{P, Q, R\}$

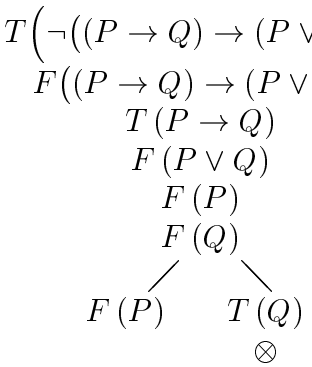
3. Disjunktiivinen normaalimuoto:



Avoimista haaroista saadaan DNF

$$(P \wedge \neg Q) \vee P \vee Q \equiv P \vee Q$$

Konjunktiivinen normaalimuoto:



Avoimista haaroista saadaan DNF

$$\neg\big((P \to Q) \to (P \vee Q)\big) \equiv \neg P \wedge \neg Q$$

siis CNF on

$$(P \to Q) \to (P \vee Q) \equiv \neg(\neg P \wedge \neg Q) \equiv P \vee Q$$