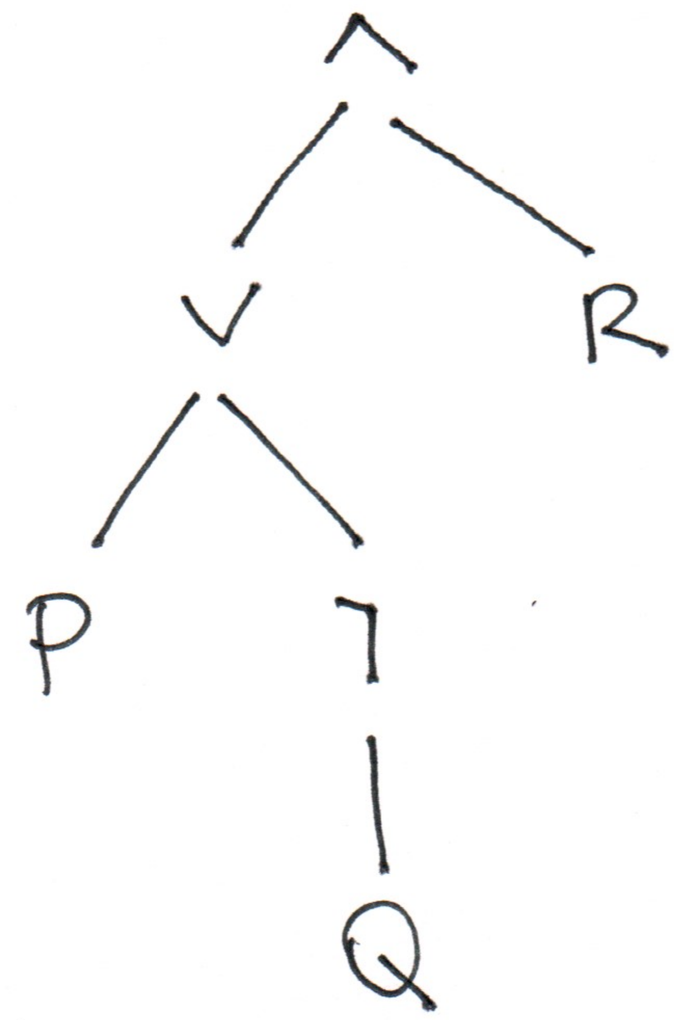
(1)

26-9-16

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




| | P | Q | R | ¬Q | P ∨ ¬Q | (P ∨ ¬Q) ∧ R |
|---|---|---|---|---|---|---|
| $v_0$ | 0 | 0 | 0 | 1 | 1 | 0 |
| $v_1$ | 0 | 0 | 1 | 1 | 1 | 1 |
| $v_2$ | 0 | 1 | 0 | 0 | 0 | 0 |
| $v_3$ | 0 | 1 | 1 | 0 | 0 | 0 |
| $v_4$ | 1 | 0 | 0 | 1 | 1 | 0 |
| $v_5$ | 1 | 0 | 1 | 1 | 1 | 1 |
| $v_6$ | 1 | 1 | 0 | 0 | 1 | 0 |
| $v_7$ | 1 | 1 | 1 | 0 | 1 | 1 |

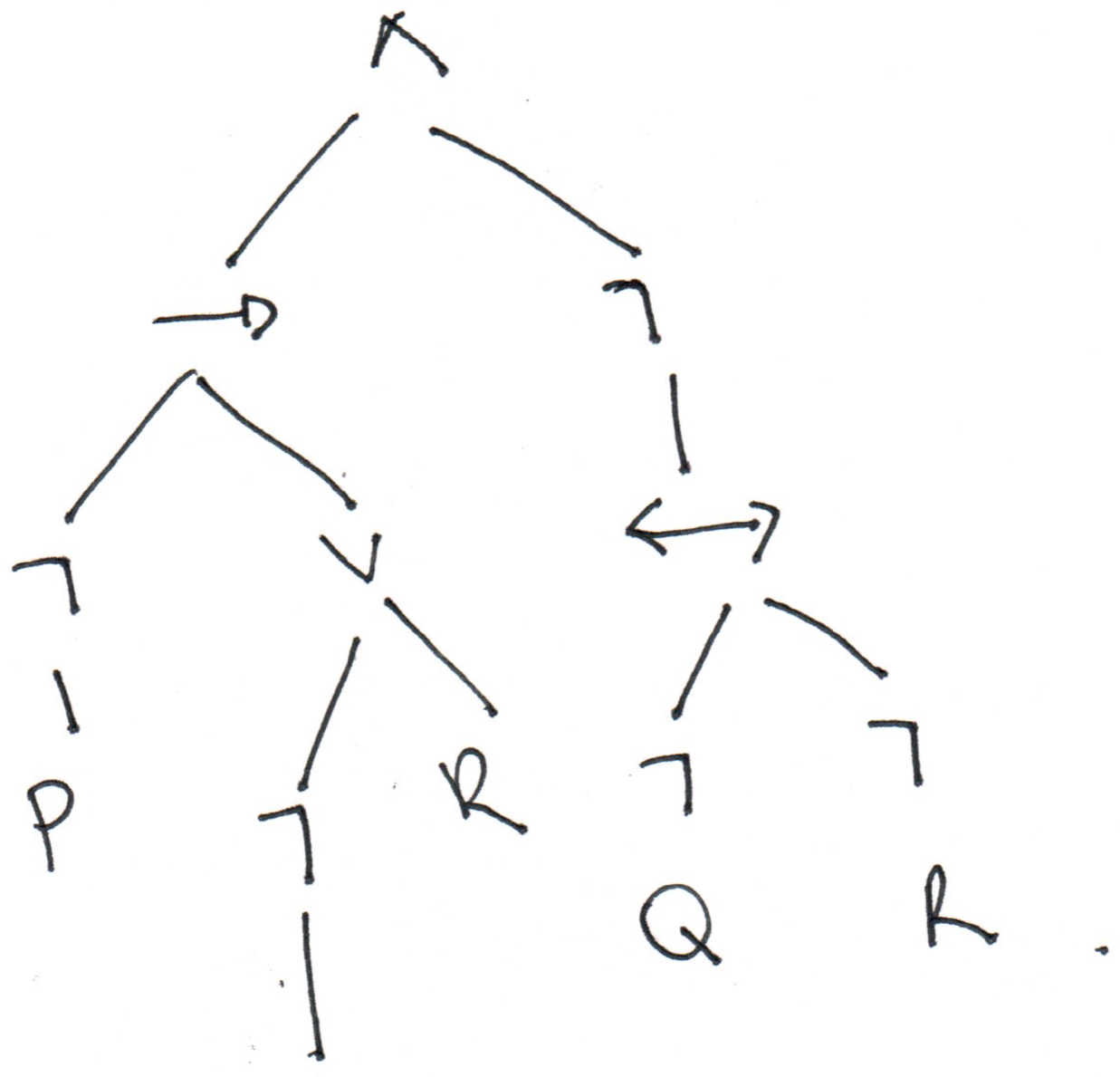
$P=0, Q=0, R=1$
$P=1, Q=0, R=1.$
$P=1, Q=1, R=1.$

} make the formula true.

(2)

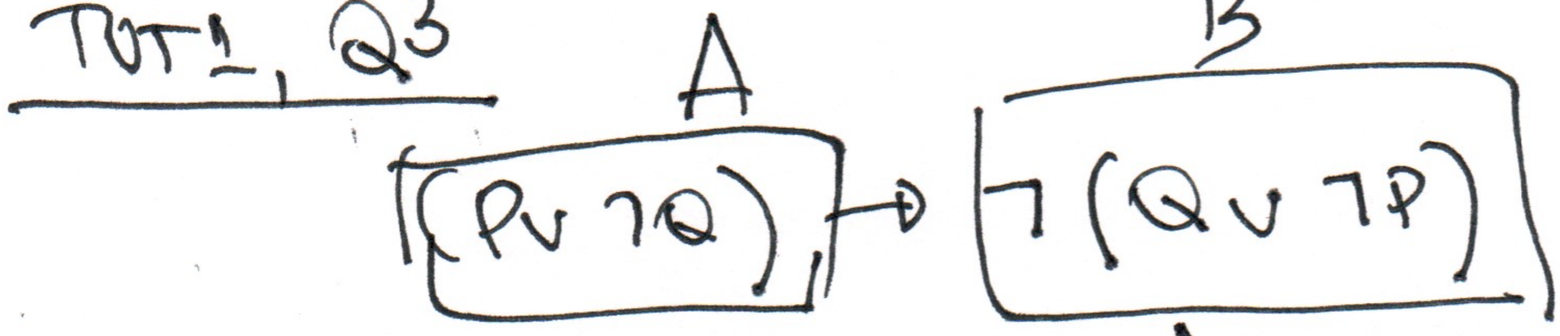
Tut 1, Q2

$$(\neg p \rightarrow (\neg Q \vee R)) \wedge \neg(\neg Q \leftrightarrow \neg R)$$




Q

Tut 1, Q3




| P | Q | ¬Q | ¬P | A: P ∨ ¬Q | Q ∨ ¬P | B: ¬(Q ∨ P) | → |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |