**Discrete Structures Class 20/9/19**

**Exercise**

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**Problem 1.**

Let p q r be the propositions:

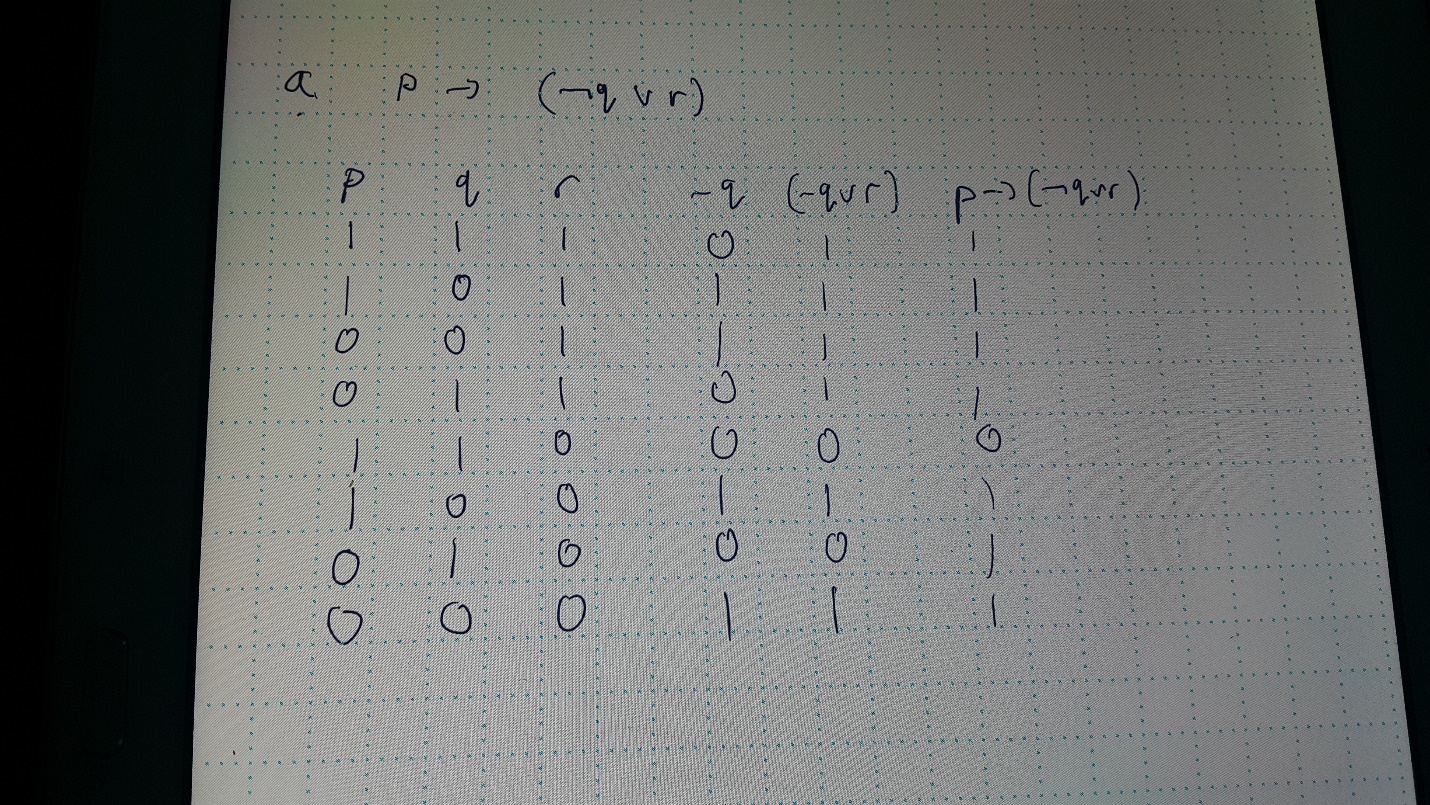
p: you have the flu

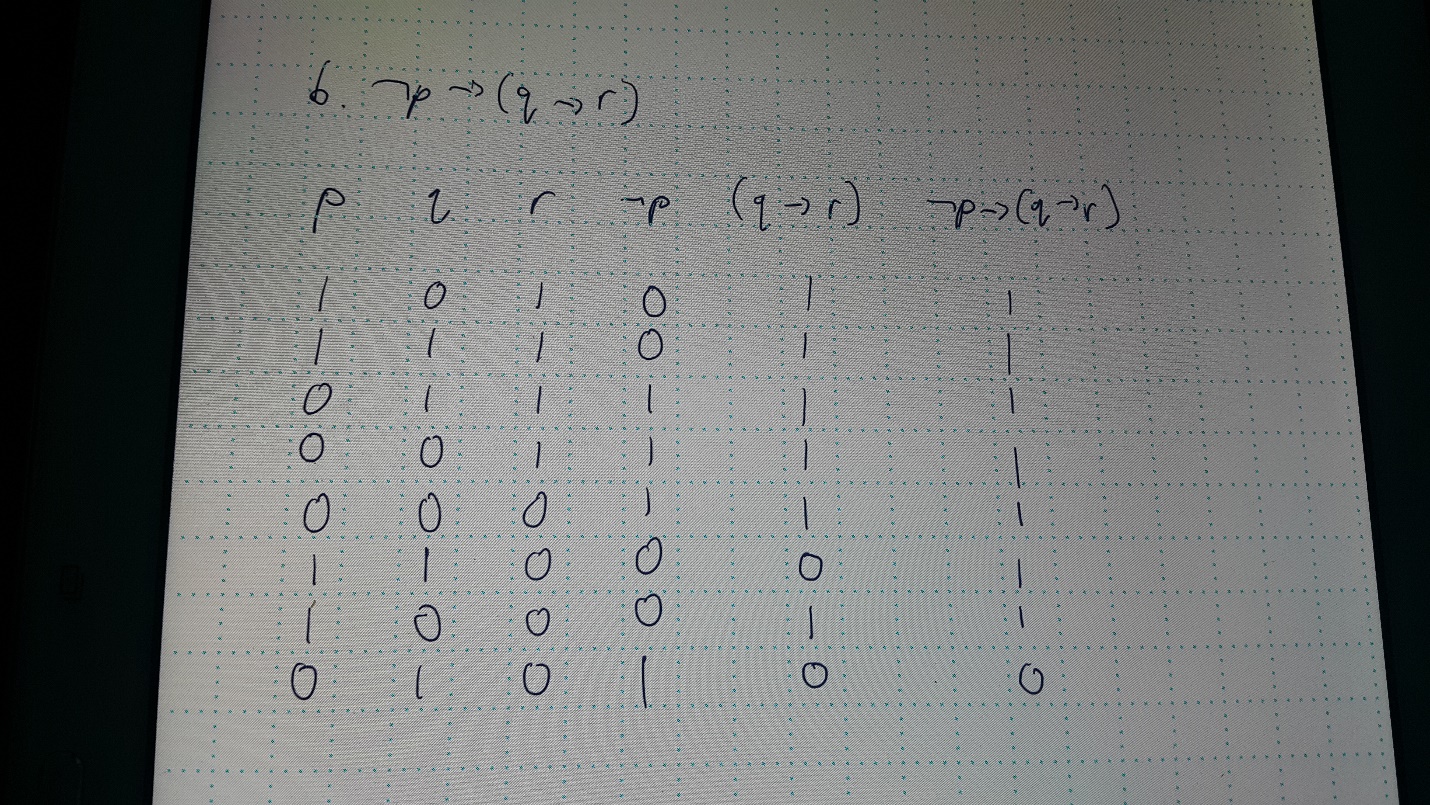
q: you miss the exam

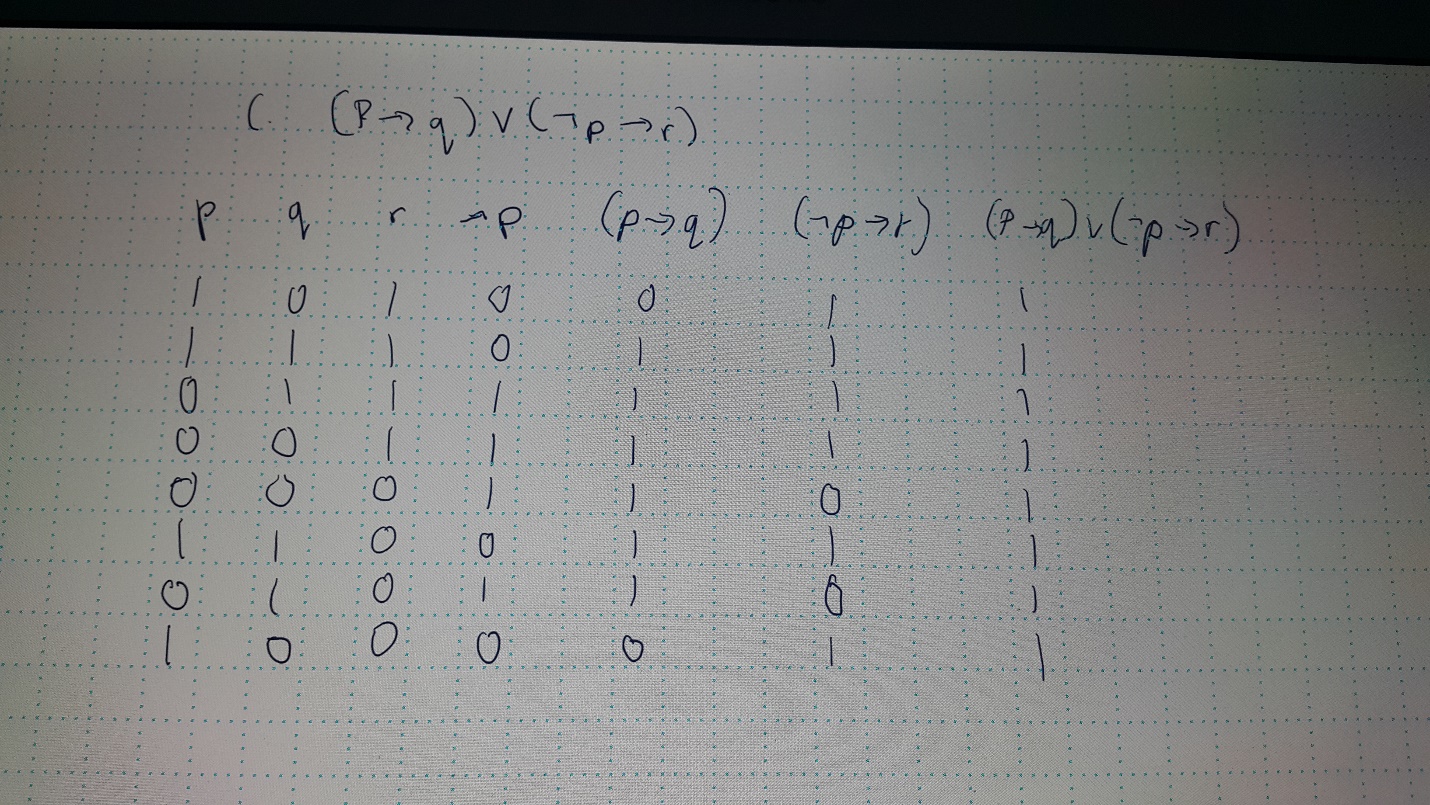
r: you pass the course

1. p → q : If you have the flu, you will miss the exam
2. ¬q ↔ r: If and only if you didn’t miss the exam then you passed the course / if and only if you passed the course then you didn’t miss the exam
3. q → ¬r : if you missed the exam then you didn’t pass the course
4. p ˅ q ˅ r: you had the flu or you missed the exam or you passed the course
5. (p → ¬ r) ˅ (q → ¬r): if you had the flu then you don’t pass the course or if you missed the exam then you don’t pass the course too
6. (p˄q)˅(¬q˄r): you have the flu and miss the exam or you don’t miss the exam and pass the course

**Problem** **2:**

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