

## Math 2001 - Your Best Work Homework 1

This assignment differs from your daily homework, in that it covers material you have had enough time to fully integrate. Communicate clearly and completely, without being repetitive or overly wordy. Typeset your solutions (with latex).

1. Use truth tables to prove that  $(\sim P \vee Q) \Rightarrow P$  is logically equivalent to  $P \vee (P \wedge \sim Q)$ .
2. Use the logic laws already proved in Section 2.6 and the exercises of Section 2.6 to show (this time without truth tables) that  $(\sim P \vee Q) \Rightarrow P$  is logically equivalent to  $P \vee (P \wedge \sim Q)$ .