

AMERICAN UNIVERSITY OF BEIRUT
Faculty of Arts and Sciences - Mathematics Department
Fall 2011 - 2012
Checkpoint 1

Name:.....

Given the operator $|$ known as NAND or the Sheffer Stroke where $p|q$ is true when either p or q or both are false, and false when both are true.

- a) Show that $p|q$ is logically equivalent to $\neg(p \wedge q)$
- b) Show that $(p|q)|r$ is not logically equivalent to $p|(q|r)$. (which means that $|$ is not associative)