INTRODUCTION TO COMPUTATIONAL LOGIC
HOMEWORK 1
DUE DATE: OCTOBER 4, 2017

(1) Show $q \implies r \vdash (p \implies q) \implies (p \implies r)$ is valid.
(2) Show $\vdash \neg p \implies (p \implies (p \implies q))$ is valid.
(3) Show $p \implies q \vdash \neg p \vee q$ is valid.
(4) Show $(s \implies p) \vee (t \implies q) \vdash (s \implies q) \vee (t \implies p)$ is valid.
(5) Show $(p \wedge q) \implies r, r \implies s, q \wedge \neg s \vdash \neg p$ is valid.