

INTRODUCTION TO COMPUTATIONAL LOGIC
HOMEWORK 1
DUE DATE: OCTOBER 7, 2020

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