INTRODUCTION TO COMPUTATIONAL LOGIC
HOMEWORK 1
DUE DATE: OCTOBER 6, 2021

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