

H.W 1 , Math 215 , Spring 2016

(1) Write out truth tables for the statements $(\text{not } P) \Rightarrow Q$, $P \Rightarrow (P \Rightarrow Q)$, $(P \Rightarrow Q) \Rightarrow P$, $P \Rightarrow (Q \Rightarrow P)$.

(2) Show using a truth table that the statement

$$n^2 = 9 \Rightarrow (2 = 1 \Rightarrow n = 3)$$

is valid.

(3) Show using a truth table that the statements

$$Q , (Q \Rightarrow P) \Rightarrow Q$$

are equivalent, i.e. have the same truth value irrespectively of what P and Q are.