

Math 114
Truth Tables
Equivalent Statements

1) Show that the following pairs of statements are equivalent.

a) $p \rightarrow q$ and $\sim p \vee q$

b) $q \rightarrow p$ and $\sim p \rightarrow \sim q$

2) Complete a truth table for each statement.

a) $(p \wedge q) \rightarrow p$

b) $\sim (p \wedge q) \wedge (\sim q)$

c) $\sim p \wedge q$

d) $p \vee \sim q$

e) $q \rightarrow (p \wedge \sim q)$

f) $(p \wedge q) \wedge p$

g) $\sim p \rightarrow q$