163 Quiz 2 Name: _____

Given the conditional statement $p \to q$ **converse** is $q \to p$, the **inverse** is $\neg p \to \neg q$, and the **contrapositive** is $\neg q \to \neg p$

1. Write the converse, inverse and contrapostive of the statement "If $x = 3$ then $x^2 = 9$"

   (a) converse

   (b) inverse

   (c) contrapositive

2. Write the converse, inverse and contrapostive of the statement "If it is Friday, then I go to the movies."

   (a) converse

   (b) inverse

   (c) contrapositive

3. Show that $\neg(p \to q) \equiv p \wedge \neg q$ without using a truth table.