

Quiz #3 10/23/09

Name: _____

Directions: Make sure to read each problem carefully. To receive full credit, you must show all of your work.

Problem 1. Consider the statement

”If John is purple, then he is a mathematician.”

a. (2 points) State the contrapositive of this implication.

b. (2 points) State the converse of this implication.

Problem 2. (5 points) Simplify the statement

$$(-p \vee -q) \wedge (F_0 \vee p) \wedge p$$

using the Laws of Logic we've discussed.

Problem 3. (5 points) Establish the validity of the argument

$$\begin{array}{l} p \rightarrow q \\ (q \wedge r) \rightarrow s \\ r \\ \hline p \rightarrow s \end{array}$$

using the Rules for Inference we've discussed.