Math 110 Quiz 2 Summer 2004 NAME:

1. Using the symbolic representation
   \( p \): I do my homework regularly.
   \( q \): I pass the course.
   \( r \): I attend class.
(a) Express the following statement in words.

\[ (\sim p \lor \sim r) \rightarrow \sim q \]

(b) Express the following in words:

\[ q \rightarrow (p \land r) \]

2. Negate the following sentences:
   (a) All Mobilians like grits.

   (b) Some students like the instructor.

3. (a) Construct truth tables for the statements \( p \rightarrow q \) and \( \sim q \rightarrow \sim p \).

   (b) Are the two statements logically equivalent?