

The majority of the credit you receive will be based on the completeness and the clarity of your responses. **Show all of your work and justify your solutions as much as possible.**  
This is a 15 minute quiz and has 2 questions, for a total of 10 points

Let  $S$  be the statement: "For any prime integer  $p$ , there is a prime integer  $q$  such that  $q > p$ ."

(5 points) 1. Restate  $S$  formally (use symbols instead of words).

(5 points) 2. Determine the negation of  $S$  and state it formally (using symbols).