LOGIC
QUIZ #11

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As we approach end of this class, we all visit the island of knights and knaves. We are now proud to be well-educated and perfectly accurate logicians: that is, anything we prove is really correct – we never prove anything false. Recall that on this island, knights make only true statements and knaves make only false statements. We meet a native named SuchMuch who made a statement from which it follows that SuchMuch must be a knight, but we could never prove that he is!

Q1. [15] What statement could SuchMuch have made?

Soln1. *Here is a possible solution: SuchMuch said that "None of you could ever prove that I am a Knight." Now suppose SuchMuch were a knave. Then, the statement is false, and one of us could prove that SuchMuch is a knight: but remember, then that since we are all accurate logicians, we would never prove anything false. So SuchMuch is a knight and the statement is true. Which also implies that we will never be able to prove that SuchMuch is a knight. QED.*