

# CSE 311: Foundations of Computing I

## QuickCheck: Gates and Equivalence (due Thursday, October 2)

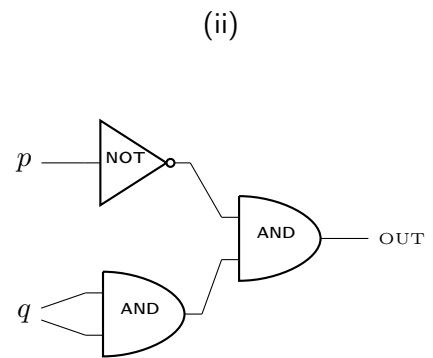
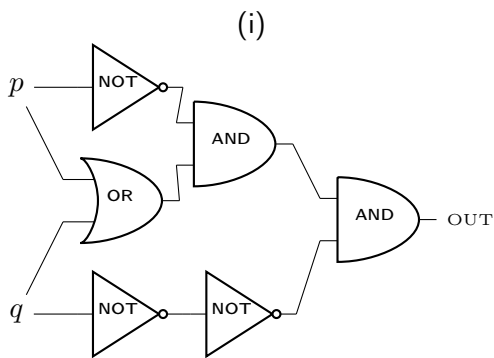
Name:

UW ID:

CSE 311 Section (circle one):      AA      AB      AC      BA      BB      BC

### 0. If you turn the paper horizontally, the circuits look like robots (:

(a) Convert each of the following circuits to logical expressions.



(b) Prove that (i) and (ii) are equivalent using a truth table.


(c) Prove that (i) and (ii) are equivalent using propositional equivalences. See the back page for a full list of them.

(d) Write (i) and (ii) as expressions in boolean algebra.

## 1. One Question!

Please come up with one question related to the course that hasn't been answered yet. It could be about policy, content, instructors, TAs, etc.