

CSE311: Quiz Section, 9/29/2011

September 29, 2011

1. Introductions

- (a) Pair up with someone you don't know and ask each other this question: "What was your favorite or most interesting class so far that was NOT a CSE class or a prereq for admission to the CSE major. Why?"
- (b) Introduce that person to the class.

2. Knights and Knaves

You are on an island of knights and knaves. Knights always tell the truth and knaves always lie. You encounter two people, A and B . Determine, if possible, what the two people are:

- (a) A says "At least one of us is a knave" and B says nothing.
- (b) A says "The two of us are both knights" and B says " A is a knave"
- (c) A says "I am a knave or B is a knight" and B says nothing.
- (d) Both A and B say "I am a knight"
- (e) A says "We are both knaves" and B says nothing

3. Truth Tables

Fill in the truth table for $(p \wedge q) \oplus (\neg q \vee r)$:

p	q	r	$\neg q$	$(p \wedge q)$	$(\neg q \vee r)$	$(p \wedge q) \oplus (\neg q \vee r)$

For more practice with truth tables:

Book website: <http://www.mhhe.com/rosen> → 7th Edition → "Student Edition" → "Course-wide Content" → "Interactive Demonstration Applets" → "Chapter 1" → "Truth Tables"

4. Implication operator: $p \rightarrow q$

Example:

p: We are in Seattle

q: We are in Washington State.

$p \rightarrow q$: If we are in Seattle then we are in Washington State

Truth Table:

p	q	$p \rightarrow q$
T	T	
T	F	
F	T	
F	F	

5. Homework practice, problem 2

Write each of these statements in the form "if p, then q" in English

- (a) It snows whenever the wind blows from the northeast.
- (b) The apple trees will bloom if it stays warm for a week.
- (c) That the Pistons win the championship implies that they beat the Lakers.
- (d) It is necessary to walk 8 miles to get to the top of Long's Peak.
- (e) To get tenure as a professor, it is sufficient to be world-famous.
- (f) If you drive more than 400 miles, you will need to buy gasoline.
- (g) Your guarantee is good only if you bought your CD player less than 90 days ago.
- (h) Jan will go swimming unless the water is too cold.