

Discrete Mathematics and Statistics (CPT107)

Tutorial 8 bis

1. Let S = it is sunny, C = camping is fun, H = the homework is done, and M = mathematics is easy.

a. Translate the following proposition into the most natural equivalent statement in English. Try to make the sentence as simple and as natural as possible.

$$(M \rightarrow H) \wedge (S \rightarrow C)$$

b. Translate the following statement into propositional logic.

“Mathematics is easy or camping is fun, as long as it is sunny and the homework is done.”

2. Three boxes are presented to you. One contains gold, the other two are empty. Each box has imprinted on it a clue as to its contents; the clues are

(Box 1) The gold is not here

(Box 2) The gold is not here

(Box 3) The gold is in Box 2

Only one message is true; the other two are false. Which box has the gold? Formalize the puzzle in Propositional Logic and find the solution using a truth table.