

Mathematics 2200H – Mathematical Reasoning

TRENT UNIVERSITY, Fall 2023

A Knights and Knaves Puzzle

Knights and knaves logic puzzles were made popular by the philosopher and mathematician Raymond Smullyan.* Below is Puzzle #125 of a collection of 382 such puzzles at Hong Kong University's Philosophy Department.†

A very special island is inhabited only by knights and knaves. Knights always tell the truth, and knaves always lie.

You meet four inhabitants: Zippy, Peggy, Alice and Ted. Zippy tells you that it's false that Alice is a knave. Peggy tells you, "Zippy and Alice are both knights or both knaves." Alice claims that Ted is a knave. Ted claims that Zippy is a knight and Alice is a knave.

Can you determine who is a knight and who is a knave?

* There is an article about him on Wikipedia at: http://en.wikipedia.org/wiki/Knights_and_Knaves

† <https://philosophy.hku.hk/think/logic/knights.php>