

Mathematics 2200H – Mathematical Reasoning
TRENT UNIVERSITY, Fall 2025
Two Small Logic Puzzles

WHERE ARE[N'T] THE MINES?



The start of a game in K Mines, a Minesweeper clone.

THE ISLAND OF KNIGHTS AND KNAVES

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

You meet six inhabitants: Bob, Zed, Zoey, Sally, Zeke and Zippy. Bob says that Zeke is a knave. Zed says that Zippy is a knave. Zoey tells you that Zippy and Sally are both knights or both knaves. Sally tells you, Bob is a knave. Zeke says, I am a knight and Zoey is a knave. Zippy says that Bob is a knave.

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

This is puzzle #226 in the collection at the University of Hong Kong, which you can find at:
<https://philosophy.hku.hk/think/logic/knights.php>