Mathematics 2200H – Mathematical Reasoning
Trent University, Fall 2017
Assignment #3
Knights and Knaves
Due on Thursday, 28 September.

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

You meet seven inhabitants: Joe, Sue, Sally, Bozo, Dave, Zed and Alice. Joe says that Dave could claim that Alice is a knave. Sue says that Bozo and Joe are both knights or both knaves. Sally claims, "At least one of the following is true: that I am a knight or that Sue is a knave." Bozo claims, "Sally is a knave." Dave claims that Alice is a knight or Bozo is a knight. Zed claims, "Of I and Sally, exactly one is a knight." Alice says, "Dave could say that Zed is a knave."

1. Determine, as best you can, which of the seven are knights and which are knaves. *[10]*

NOTE. The problem given above is Puzzle #273 out of 382 from the collection at:

philosophy.hku.hk/think/logic/knights.php

The Opposite View

For many system-shoppers it's
    a good-for-nothing system
that classifies as opposites
    stupidity and wisdom,

because by logic-choppers it's
    accepted with avidity:
stupidity's true opposite's
    the opposite stupidity.

    Yet another grook by Piet Hein.