

Mathematics 1100Y – Calculus I: Calculus of one variable

TRENT UNIVERSITY, Summer 2010

Assignment #8

The Island of Knights and Knaves

Due on Wednesday, 7 July, 2010.

1. Every native of the Island of Knights and Knaves is either a knight who always tells the truth or a knave who always lies. While visiting the Island you meet six natives, whom we'll designate as A through F, who tell you the following:

A: Both D and E are knaves.

B: E is a knave or F is a knave.

C: E is a knight and F is a knight.

D: C could say that B is a knight.

E: D is a knave.

F: C could say that B is a knave.

Determine, as best you can, which of the six are knights and which are knaves[†]. [10]

[†] This puzzle was adapted from one by Zachary Ernst