

Mathematics 1550H – Introduction to probability

TRENT UNIVERSITY, Winter 2015

Assignment #4

Decisions, decisions ...

Due on Tuesday, 7 March, 2015.

1. Playing a game at a fair, you are asked to choose one of four boxes, which are identical in appearance. One of the boxes contains a prize and the other three are empty. Once you select a box, the carnie running the game opens one of the other boxes, shows you that it is empty, and gives you the chance to change your mind, *i.e.* to pick a box other than the one you selected first. Will changing your selection improve your chances of winning or not? Give a complete explanation! [10]

CLUE? No one expects a snakeless mathematical inquisition to come to this hall!