

Statistical Methods - MATH2715 - University of Leeds

WORKSHOP 1

PRACTICE ON:

- Exercise n.56 Chapter 1 *Math. Stat. and Data Anal.*, by J.A. Rice
- Monty Hall Problem
- Birthday Problem

Facts: A couple has two children.

Questions

- (a) What is the probability that both are girls given that the oldest is a girl?
- (b) What is the probability that both are girls given that one of them is a girl?

Birthday Problem

In a classroom of n students, what is the probability p_n that two (or more) students share the same birthday?

Monty Hall Problem

Suppose you are on a game show, and you are given the choice of three doors: Behind one door is a car; behind the others, goats. You pick a door, say No. 1, and the host, who knows what's behind the doors, opens another door, say No. 3, which has a goat. He then says to you, "Do you want to pick door No. 2?" Is it to your advantage to switch your choice?