

Mathematical Modeling

Assignment 2

Exercise 1 *Draw the complete tree diagram of conditional probabilities for choosing a marble without replacement from an urn containing three red and two green marbles. Using the tree determine:*

- *the probability that the last marble is green,*
- *the probability that two greens are chosen in row during the entire exercise,*
- *the probability the three red marbles are chosen first.*

Exercise 2 *The tree is simply a visual way of enumerating all possible cases. Can you find quicker ways to compute the above probabilities, without enumeration or drawing the tree?*