CS 238 Discrete Mathematics II

## Exercises 6.1 An Introduction to Discrete Probability

Pages 399-400 Grading Criteria

22. Customer's favorite color: @@hash22@@

Give yourself 1 point for getting the correct answer, and 1 point for an explanation of your solution, for a total possible of 2 points. (a)@hash22(a)@

- 24. Find the probability of winning the lottery by selecting the correct six integers, where the order in which these integers are selected does not matter, from the positive inte-gers not exceeding
  - a) 30.
  - b) 36.
  - c) 42.
  - d) 48.

For each part (a-d), give yourself 1 point for getting the correct answer, and 1 point for an explanation of your solution, for a total possible of 8 points.

- 26. Find the probability of selecting none of the correct six integers, where the order in which these integers are selected does not matter, from the positive integers not exceeding
  - a) 40.
  - b) 48.
  - c) 56.
  - d) 64.

For each part (a-d), give yourself 1 point for getting the correct answer, and 1 point for an explanation of your solution, for a total possible of 8 points.

40. Suppose that instead of three doors, there are four doors in the Monty Hall puzzle. What is the probability that you win by not changing once the host, who knows what is behind each door, opens a losing door and gives you the chance to change doors? What is the probability that you win by changing the door you select to one of the two remaining doors among the three that you did not select?

Give yourself 2 points for the correct answer, another 2 points for a well-thoughtout argument for your answer, and another 2 points for a well-articulated argument for your answer, for a total possible of 6 points. Lorem ipsum dolor sit amet, conceptam quaerendum omittantur sed ex. Cu justo numquam liberavisse his, vel accusata gubergren vulputate an. Postea oblique legimus in eos, copiosae argumentum eos ut, accusamus comprehensam mea cu. Altera postea urbanitas mel ex, ad sumo nemore vel, impedit nominavi verterem an usu. Ne nam quando graece, mea reque patrioque interesset in, cu latine prompta duo. Mei at tota labores. Sit ut fugit incorrupte, ex nec ornatus inermis, quo vitae molestiae ei.

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