UNIVERSITY OF CALIFORNIA, SANTA BARBARA
Department of Electrical and Computer Engineering

ECE 139 Spring 2019 Instructor: K. Rose

Some Midterm Problems and Formula Sheet from 2018

Problem # 1 (30). A lottery drawing is conducted by allowing a sequence of K balls bearing numbers to pop out of a container. In the container there are N balls numbered $1, 2, \cdots, N$ and, of course, balls that "pop out" are not returned to the container before the end of the event. What is the probability that:

a) The first ball bears a number smaller than integer n where $1 \leq n \leq N$?

b) The second ball's number is greater than the first ball's number.

c) The sequence of K ball numbers produced in the drawing is in increasing order.