

Department of Mathematics and Computer Science  
Probability and Statistics Challenge Problems 7

*Please submit solutions by Wednesday November 18, at 3pm*

A drawer contains white socks and black socks. When two socks are randomly selected from the drawer, the probability that both are white is  $1/2$ .

1. How small can the number of socks in the drawer be?
2. How small can the number of socks in the drawer be, if the number of black socks is even?

*Solutions to any or all of the problems may be submitted to John Sheriff (D510). If no one is in the office, just put the solution under the door. Please include your name and student number. Students with correct solutions will be acknowledged and prizes will be awarded at the end of the year based upon performance during the year. Problems and solutions are available at <http://www.cs.uleth.ca/~sheriff/statistics/challenge.htm>.*