

Hints for Homework 4

1. Problems 1 and 3 are a little longer than the others. You may want to start with 2, 4, 5, and 6.
2. For the blood testing problem, you want to assume that each individual in the sample has a probability p of having the disease, independently of the others. Note that the group is at most divided twice. (So you can assume that n is a multiple of 4 to avoid unnecessary complications.) It may be a good idea to express the number of tests performed as a function of indicator functions; e.g., you may introduce indicators for the half-group and quarter-group tests returning positive.
3. For the newsboy problem, use a calculator (or a computer) to evaluate the desired sum.
4. For the camera problem, think about indicator functions (as for the hat problem we have seen in class).