S-72.340 INFORMATION THEORY

Exercise 6, October 25, 2000

1. Determine the capacity of the M-ary symmetric channel in Problem 4 of Exercise 5.
2. Do the same for the channel in Problem 5. The non-zero transition probabilities $P(y|x)$ are still equal to $1/3$, but the probabilities of the input symbols must be determined so that $I(X;Y)$ is maximized.

Try to solve as many problems as you can. Return your solutions by the time that the exercise begins. You can bring them to the exercise or put them into the 'return box' below the information board of our laboratory on the 2nd floor.