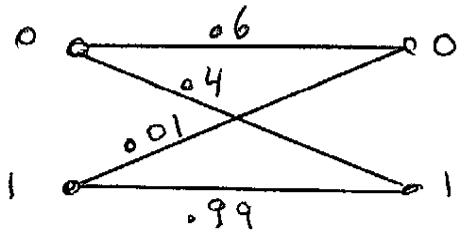
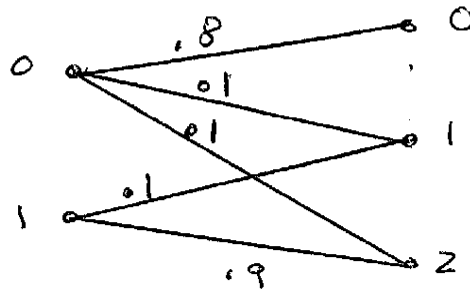


Homework #4 ECE 154C SP 09
 Due MAY 6th

1. Find the channel capacity of the following channels by a brute force computer search



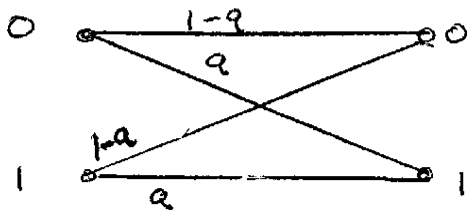
(a)



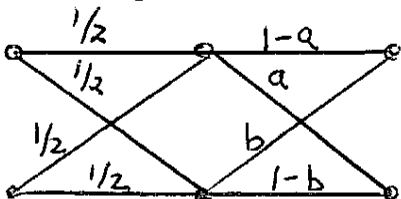
(b)

In each case give the capacity and also the maximizing input distribution

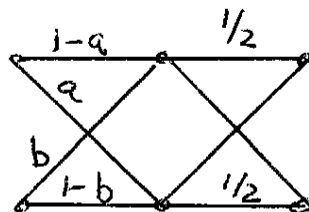
2. Analytically find the capacity of the following channel. a is an arbitrary real number in the range $0 \leq a \leq 1$.



3. Use the result of Problem 2 to show that the capacity of the following two channels is 0, $0 \leq a \leq 1$, $0 \leq b \leq 1$.



(a)



(b)