Discussion 1

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Question:

In lecture, we derived

$$\varpi^*_{0|1}(n, \epsilon) = 2^{-n(\mathrm{D}(\mathsf{P}_0\|\mathsf{P}_1)+\mathrm{o}(1))}$$

You are asked to

a) write a program to find the optimal first-order rate function in BHT,

b) conjecture what is the optimal second-order rate function and demonstrate that the second-order term will depend on ϵ