

HW 4 HONR 209M. Morally DUE Tuesday Feb 24

1. (0 points) What is your name? Write it clearly. Staple your HW. When is the first midterm? When is the final?
2. (50 points) Give a discrete protocol for Alice and Bob such that at the end of it there are two pieces (which nobody has claimed yet) P and Q such that they both think P is within ϵ of $\frac{1}{3}$ and Q is within ϵ of $\frac{2}{3}$. Argue why it works intuitively but you do not have to do the messy algebra.
3. (50 points) Give a discrete protocol for Alice, Bob, and Carol that is ϵ -proportional and super-cheat-proof. Comment on if its Envy Free. If not then is it, in some sense, close to being Envy Free?