

Assignment 1

1. If you have New Edition (2nd) of Cover and Thomas
 - Problems 2.2, 2.4, 2.5, 2.7, 2.9, 2.10, 2.11, 2.12, 2.14
2. If you have Old Edition of Cover and Thomas
 - Problems 2.2, 2.5, 2.6, 2.15, 2.16, 2.18, 2.19, 2.20 and
 - *Coin Weighing*. Suppose that one has n coins among which there may or may not be one counterfeit coin. If there is a counterfeit coin it may be either heavier or lighter than the other coins. The coins are to be weighed by a balance.
 - (a) Find an upper bound on the number of coins n so that k weighings will find the counterfeit coin (if any) and correctly declare it to be heavier or lighter.
 - (b) (*Difficult*) What is the coin weighing strategy for $k = 3$ weighings and 12 coins.
3. Drop me (myna@iisc.ac.in) a mail incase you don't have any versions.