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# 2015 Spring - Information Theory

## Homework 4 (Due to Apr.3)

### Part 1: DMS

Find the CDF at the point  $cabbcbabc$ , from the DMS

$$P(a) = 0.2, P(b) = 0.3, P(c) = 0.5$$

When taken in blocks of length 10, using the recursion seen in class.

### Part 2: Matlab Exercise

Build and test an algorithm to obtain the CDF  $F$  at the point  $s$  for a general source described by an input probability vector  $p$  for a block length  $B$ , where  $F = Fcalc(p, B, s)$ .

How would you smartly obtain the whole CDF of the block of 10 symbols?