

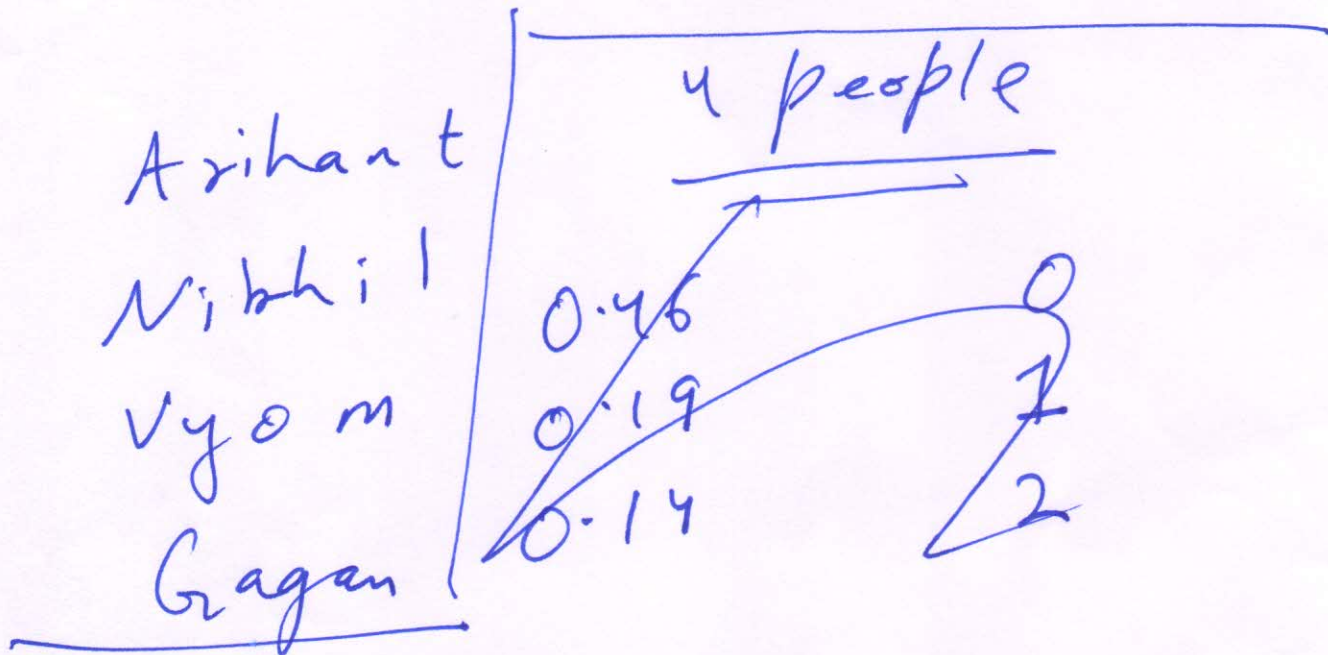
Lecture 25

Saish: - Heart

Khushali - Club

Divya - Spade ①

①



probability	# of correct guesses
0.46	0
0.30	1
0.22	2
0.02	3

Assume that there are 4 people. Each person ~~may~~ chooses a number of $\{1, 2, 3, 4\}$. The other three guess what the number is. They may choose any number with equal probability.

A	B	C	D
1	$2 - \frac{1}{4}$	2	1
	$1 - \frac{1}{4}$		
	$3 - \frac{1}{4}$		
	$4 - \frac{1}{4}$		

X = no of people who get all guesses wrong.

$E[X]$

p = probability that a person gets all guesses wrong.

$$\left(\frac{3}{4}\right)^3$$

③

We compute the probability
for B.

A :

$$p(B \text{ is correct when A made a choice}) \\ = \frac{1}{4}$$

$$p(B \text{ is wrong when A made a choice}) \\ = \frac{3}{4}$$

$$p(\text{always wrong}) = \frac{3}{4} * \frac{3}{4} * \frac{3}{4} \\ = \frac{27}{64}$$

$$p(\text{you get all correct}) \\ = \left(\frac{1}{4}\right)^3 = \frac{1}{64}$$