Lecture 25

Srishi - Heart

Khushali - Club

Divya - Spade (1)

Arihant

Nibhil

Vyom

Gagan

4 people

0.46 → 0

0.19 → 1

0.14 → 2

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

Assume that there are 4 people. Each person chooses a number $\{1, 2, 3, 4\}$. The others then 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 is correct when A made a choice)

$= \frac{1}{4}$

p(B is wrong when A made a choice)

$= \frac{3}{4}$

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

$= \frac{27}{64} =$

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p(you get all correct)

$= \left(\frac{1}{4}\right)^3 = \frac{1}{64}$