

Course outline

How does an NPTEL online course work?

Week 0

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

- Lecture 24: Local decoding of WH, Reed-Muller and Concatenated codes

- Week 25: Introduction to List Decoding

- Lecture 26: Local List decoding of WH, RM

- Quiz : Assignment 12

- Assignment 12 Solution

- Feedback for Week 12

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Assignment 12

The due date for submitting this assignment has passed.

Due on 2021-04-14, 23:59 IST.

As per our records you have not submitted this assignment.

 1) Let $P(x,y)$ be d -degree a bivariate polynomial. How many evaluations are needed at $y=a$ i.e. $P(x,a)$, to reconstruct $P(x,y)$?

1 point

- d
 d^2
 $d+1$
 Arbitrary set of points does not work

No, the answer is incorrect.

Score: 0

Accepted Answers:

 $d+1$

 2) Given real numbers a_1, \dots, a_n such that $a_1 + \dots + a_n = 1$, what is the minimum value that can be attained by $a_1^2 + \dots + a_n^2$?

1 point

- $1/n$
 1
 $1/n^2$
 Minima does not exist.

No, the answer is incorrect.

Score: 0

Accepted Answers:

 $1/n$

 3) Let $f(x,y)$ be a d -degree bivariate polynomial over a field \mathbb{F} of characteristic 0. Let $S := \{f(a, a^{d+1}) | a \in \mathbb{F}\}$, be an infinite set. How many values from S suffices to reconstruct $f(x,y)$?

1 point

- S is not an interpolating set i.e. it is not possible to reconstruct f from any such evaluations
 d
 d^2
 $(d+1)^2$

No, the answer is incorrect.

Score: 0

Accepted Answers:

 $(d+1)^2$