



Daily Article (Bharath's Reading list) - Answers and Explanations 17.05.2023

Article link : <https://bit.ly/452Nlqd> (How Randomness improves Algorithms)

1. According to the article, plugging in random numbers at certain steps in the algorithm helps to:

- A.account for uncertainty about the many ways that complex processes can play out
- B.calculate the correct answer to unambiguous true-or-false questions
- C.determine where to begin in algorithms with a chicken-and-egg problem
- D.All the above

Explanation : D

All given points are mentioned in the article.

2. Even when the optimal solution is not known, randomness can help in finding what is ____ about the optimal solution. Which of the following words best fills the given blank?

- A.self-referential
- B.non-random
- C.true
- D.arbitrary

Explanation: C

Note the line, "Randomness is basically a way to ensure that something is true about the optimal solution without knowing the optimal solution," said Aaron Bernstein, one of the authors of the new algorithm.'

3. According to Rahul Santhanam, there is something 'a bit paradoxical' about randomness being useful for problems like primality testing because:

- A. Randomness, though useful, probably isn't necessary to solve such problems
- B. Researchers have no idea how to determine whether any specific random choice is a good one
- C. Randomness helps to get a handle on the structure that solves the problem
- D. Such problems are about finding hidden, non-random patterns

Explanation: D

What is paradoxical is that randomness helps to find non-random patterns.