

AI1103 Assignment-7

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Download all python codes from

<https://github.com/CS20BTECH11062/AI1103/tree/main/Assignment-7/codes>

and latex-tikz codes from

<https://github.com/CS20BTECH11062/AI1103/tree/main/Assignment-7/Assignment-7.tex>

QUESTION (CSIR UGC NET JUNE 2013 Q.59)

Let U_1, U_2, \dots, U_n be independent and identically distributed random variables each having a uniform distribution on $(0,1)$. Then,

$$\lim_{n \rightarrow +\infty} \Pr \left(U_1 + U_2, \dots, U_n \leq \frac{3}{4}n \right)$$

- 1) does not exist
- 2) exists and equals 0
- 3) exists and equals 1
- 4) exists and equals $\frac{3}{4}$

SOLUTION

We want $U_1 + U_2, \dots, U_n \leq \frac{3}{4}n$.