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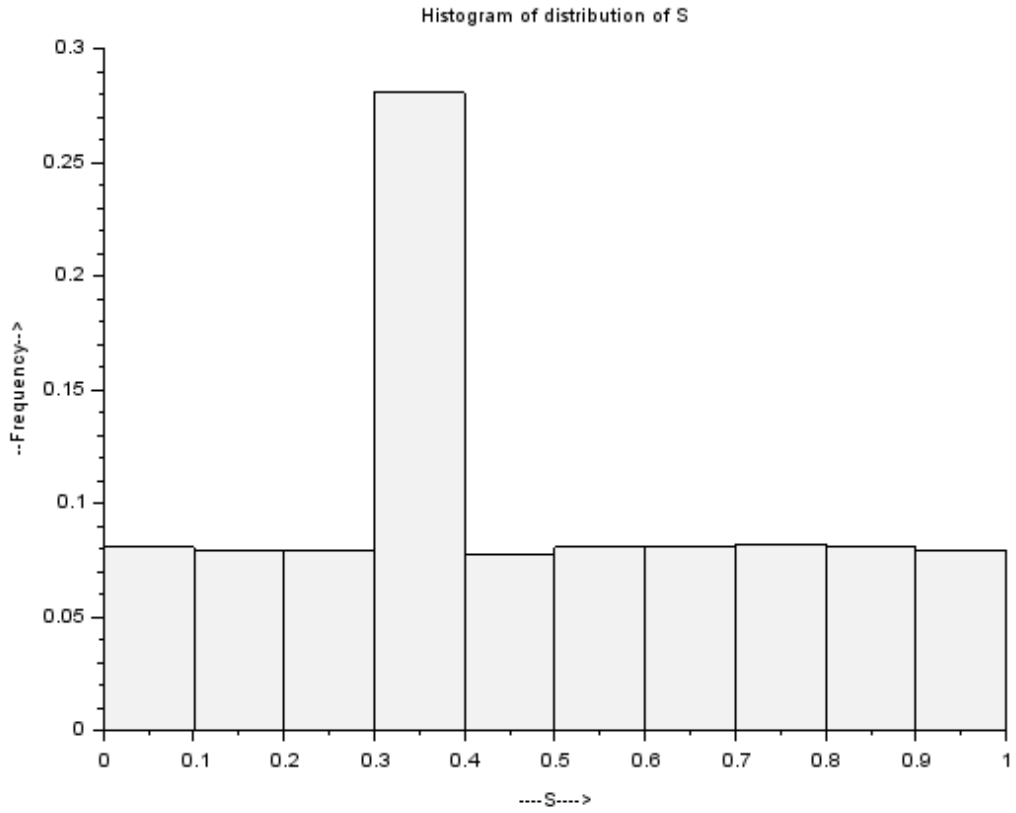
MSC PHD (OR)

Exercise 1):

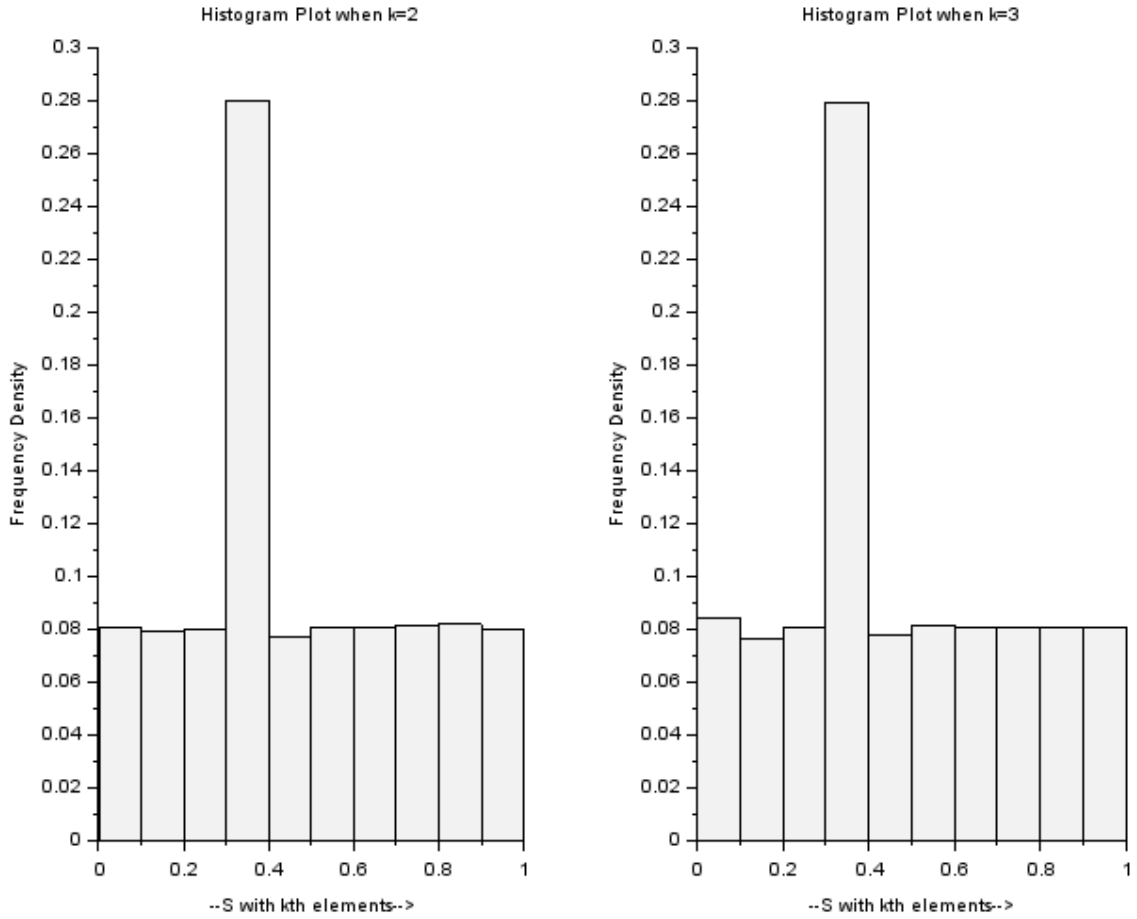
PART (a) [R]



The histogram plot of the distribution of S is as above.

The above distribution **does not** look like **uniform distribution** because the large no. of values b/w 0.3 and 0.4 is concentrated as compared to others as we can see in the histogram plot. So the above distribution does not look like randomly uniformly distributed.

PART (b) [R]



We are getting the same results as above. Most of the values are concentrated b/w 0.3 and 0.4, So the distribution does not look randomly uniformly distributed when k=2 and when k=3.

PART (c) [R]

We have seen the graph for k=1,k=2,k=3, that is , we can see that the set S is not uniformly randomly distributed and the above two tests are not sufficient for checking the randomness as when we take n=2 and n=3 then we can see the frequency densities b/w different values in the histogram plot but the test is not sufficient always

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