50 random phone numbers were taken from a phone book.

The average of the last four numbers of each is figured below. Each numbers frequency has also been figured.

1) Calculate the mean, mode, median and standard deviation of the means.

2) How does this illustrate the central limit theorem?

3) What is the probability that the mean lies between 5 & 6?

4) What is the 95% confidence interval for the mean?

5) What is the 90% confidence level?

|  |  |
| --- | --- |
|  |  |
| **Phone Number Averages** | **Frequency** |
| 1 | 1 |
| 1.75 | 1 |
| 2.25 | 1 |
| 2.5 | 2 |
| 3 | 3 |
| 3.25 | 6 |
| 3.5 | 4 |
| 3.75 | 5 |
| 4 | 4 |
| 4.25 | 5 |
| 4.75 | 5 |
| 5 | 1 |
| 5.25 | 2 |
| 5.5 | 4 |
| 6 | 4 |
| 6.25 | 1 |
| 7.25 | 1 |