

LAW OF LARGE NUMBERS

Homework Exercise

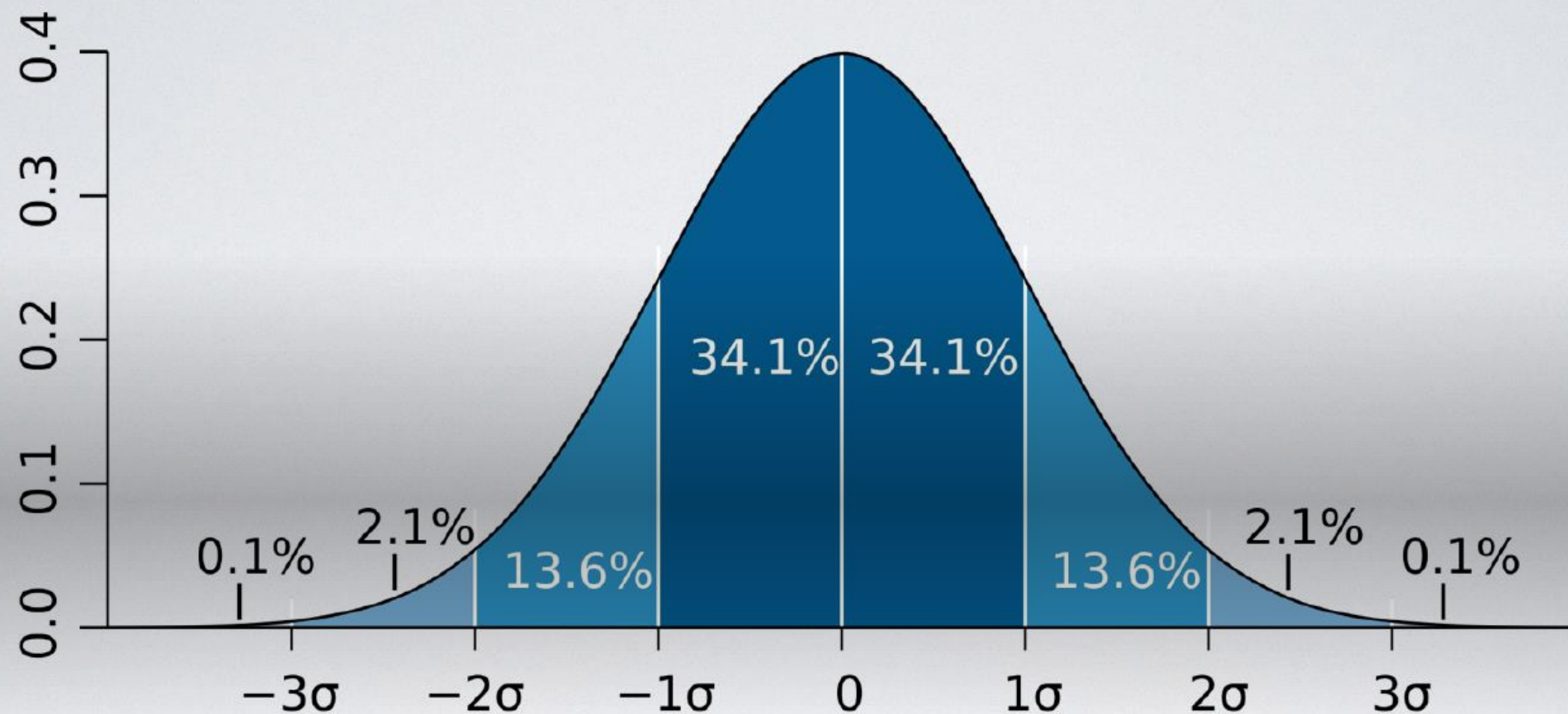
$$\bar{X}_n \longrightarrow E(X) \quad \text{when} \quad n \longrightarrow \infty$$

LLN

10:	7 / 3	70% / 30%
100:	52 / 48	52% / 48%
1000:	502 / 498	50.2% / 49.8%

...





NORMAL DISTRIBUTION

Test the Law Of Large Numbers for N random normally distributed numbers with mean = 0, stdev = 1:

Create an R script that will count how many of these numbers fall between -1 and 1 and divide by the total quantity of N

You know that $E(X) = 68.2\%$

Check that $\text{Mean}(X_N) \rightarrow E(X)$ as you rerun your script while increasing N