

CENTRAL LIMIT THEOREM

Let X_1, X_2, \dots, X_n be iid rvs with mean μ and standard deviation σ .

Let $T_n = X_1 + \dots + X_n$ and $\bar{X}_n = \frac{T_n}{n}$.

Then, as $n \rightarrow \infty$:

- The distribution of T_n approaches $N(n\mu, \sigma\sqrt{n})$.
- The distribution of \bar{X}_n approaches $N(\mu, \frac{\sigma}{\sqrt{n}})$.

LAW OF LARGE NUMBERS

\bar{X}_n converges to μ as $n \rightarrow \infty$.