X is a random variable with any distribution.

Central limit theorem

The sum of X (many many independent and identically distributed X) will become normal as the number of X goes larger.

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rule of thumb: when $n > 30$ the sum of X is already close to normal.

→ 记.

Sampling distribution : distribution of $\bar{x}$, $\hat{p}$

sample mean

sample proportion.

For $\bar{x}$ sample mean.

1) assume sample size $n \geq 30$

2) assume sample size $n < 0.1N$