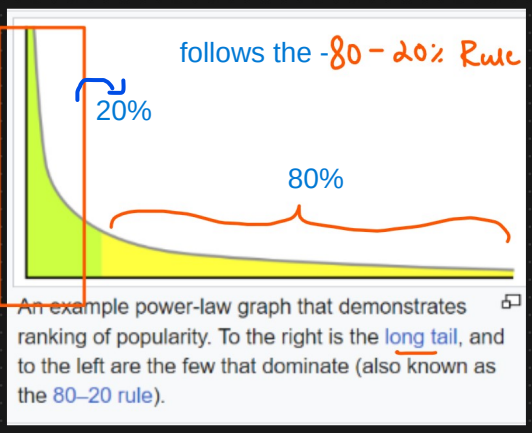
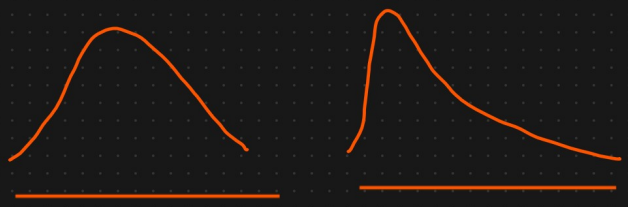
① Power Law Distribution

In statistics, a power law is a functional relationship between two quantities, where a relative change in one quantity results in a proportional relative change in the other quantity, independent of the initial size of those quantities: one quantity varies as a power of another



An example power-law graph that demonstrates ranking of popularity. To the right is the long tail, and to the left are the few that dominate (also known as the 80–20 rule).



Eg: IPL

① 20% of Team is responsible for winning 80% match

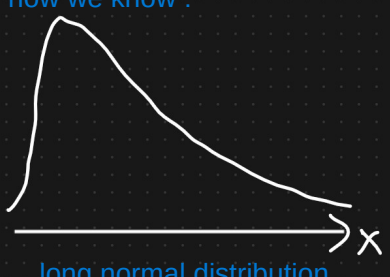
② 80% of wealth are distributed with 20% of the total Population

③ 80% of the total Oil is with 20% of the nation

④ Frequencies of words in most languages.

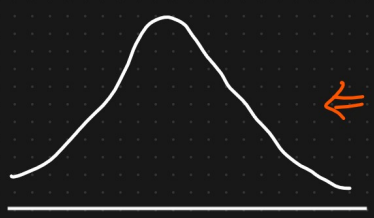
⑤ 20% of the major defects fixes the 80% of upcoming defects in a S/w product

now we know :

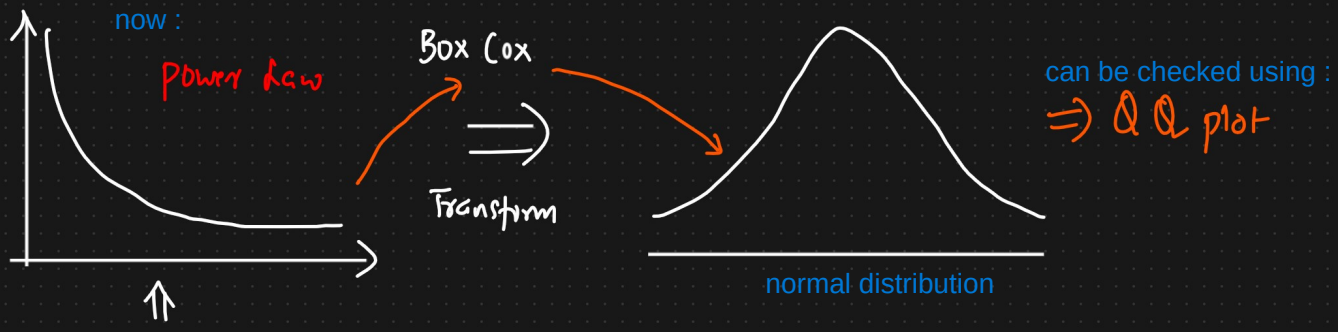


long normal distribution

applying : $\ln(x)$ ⟹



⇐ Normal Distribution



can be checked using :
⇒ QQ plot

Pareto Distribution [80-20 %]