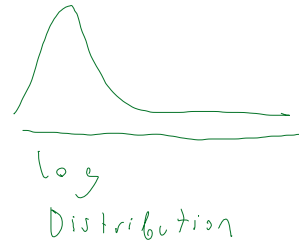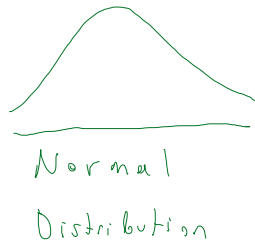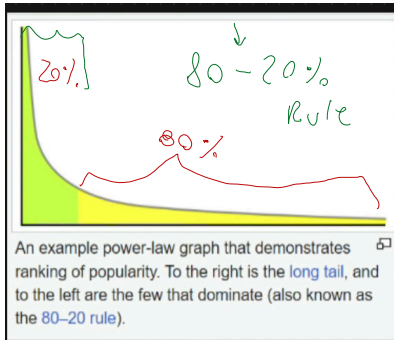In statistics, a power law is a funtional relationship between two quantities, where a relative change in one qualitiy results in a proporcial relative change in the other quantity, independent of the initial size of those quantities: one quantity varies as power of another.

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).

Normal Distribution

Log Distribution

Example I PL

1) 20% of toam is reponsible for winning 80% match

2) 80% of weath are distributed with 20% of total population

3) 80% of the total oil is with 20% of the nation

4) Frequencies of words in most languages

*) 20% of the major defects fixes the 80% of upcoming defects in a slow product

ln (x) =>

← Normal distribution

x

Power Law → Box Cox →

=> QQ plot

Transform

⇑

Pareto Distribution [80 - 20%]