① Pareto Distribution [NON Gaussian Distribution]

80-20%

Power Law

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).
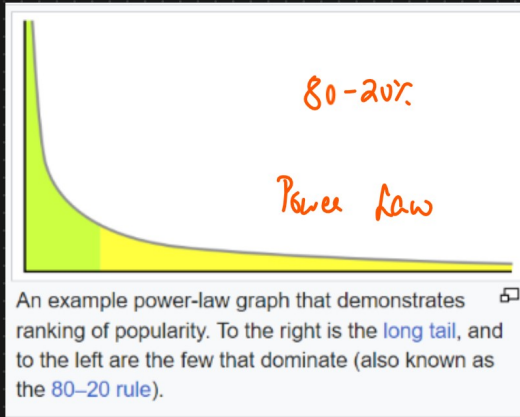
The Pareto distribution, named after the Italian civil engineer, economist, and sociologist Vilfredo Pareto is a power-law probability distribution that is used in description of social, quality control, scientific, geophysical, actuarial, and many other types of observable phenomena; the principle originally applied to describing the distribution of wealth in a society, fitting the trend that a large portion of wealth is held by a small fraction of the population.
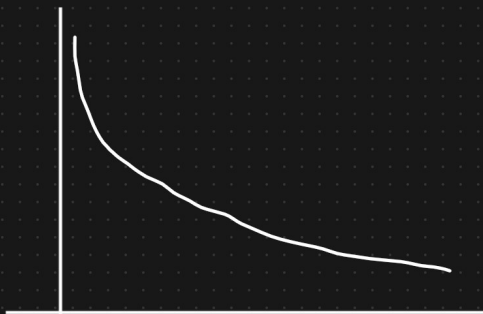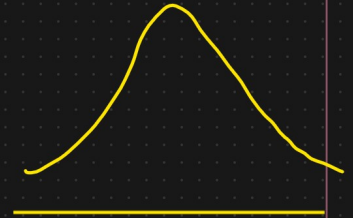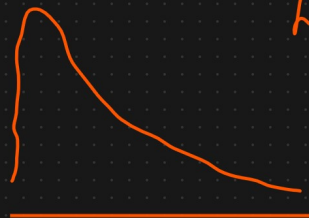

Pareto Type I
Probability density function

$\alpha \uparrow\uparrow$
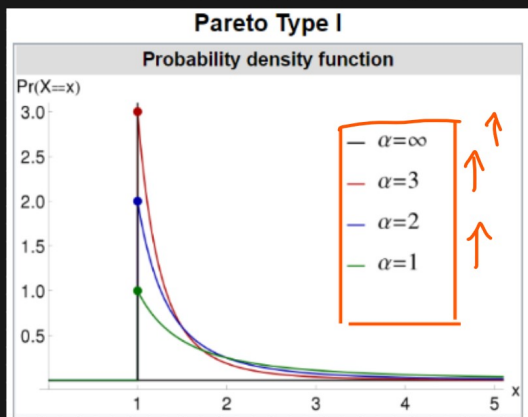
Transformation

$\Downarrow$
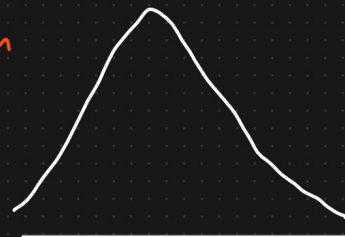
Log Normal

Box Cox
Transformation

Eg: IT Industry

① 80% of the entire project is done by 20% of the team

② 80% of defects can be solved if we

Save 20% of defects