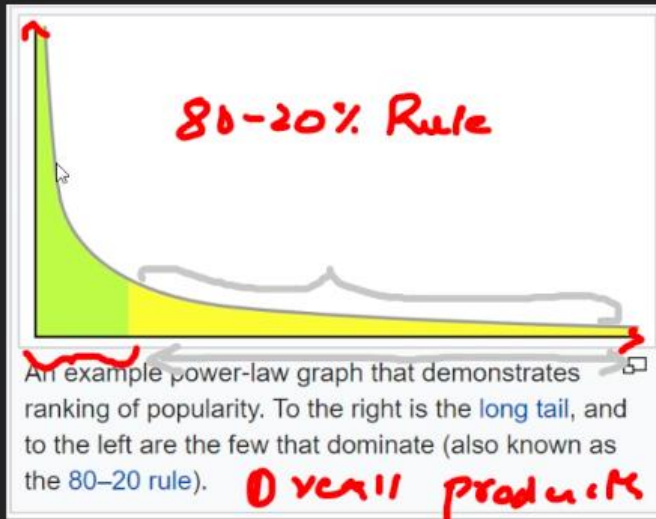


% of
Sales

80-20% Rule



A relative change in
one quantity results
in a proportional
change in other
quantity



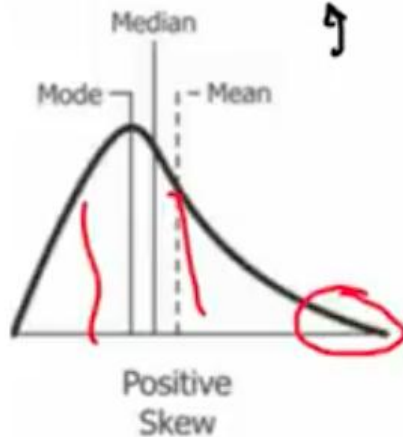
① 80% sales are coming from 20% of overall products

② 80% of Windows crashes are because of 20% of all the overall bugs

particular power law distribution guys
we can say

Mean > Median > Mode

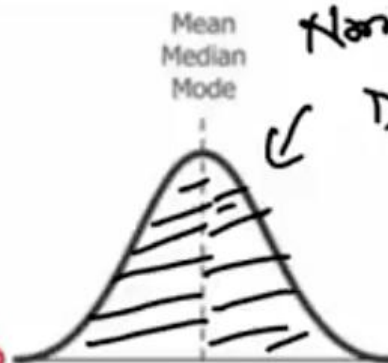
Right
Skewed



Positive Skew

Normal

Distribution

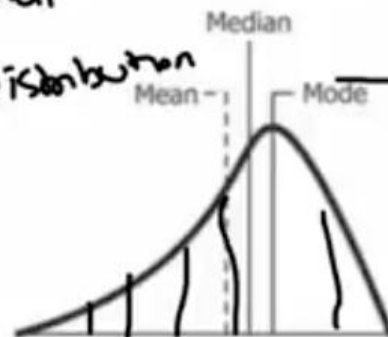


Symmetrical Distribution

Mode > Median > Mean

Mean

Avg = 50-70



Negative Skew

Mean \approx Median \approx Mode

Eg: Weight Distribution

Eg: Age

Eg: Life span of human

② Lengths of comment

Weight

Height

IRIS



$$\text{Cov}(X, Y) = \frac{1}{n} \sum_{i=1}^n (x_i - \mu_x) * (y_i - \mu_y)$$

$x \uparrow$ $y \uparrow$

$x \uparrow$ $y \uparrow = \boxed{+ve}$

$x \uparrow$ $y \downarrow = \boxed{-ve}$



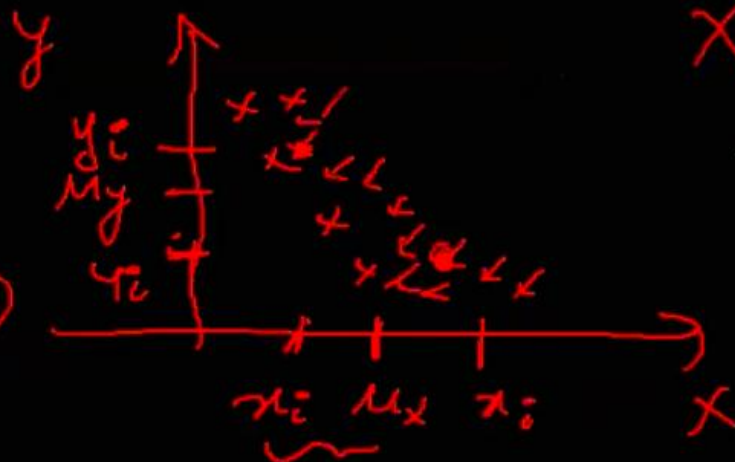
$\text{Cov}() = \boxed{+ve} * \boxed{+ve} = +ve$

$\text{Cov}() = \boxed{-ve} * \boxed{-ve} = +ve$

$x_i' > \mu_x$ $y_i' > \mu_y$ Price
 $x_i' > \mu_x$ $y_i' < \mu_y$ Size

$X \uparrow$ $Y \downarrow$

$$\text{Cov}(X, Y) = \frac{1}{n} \sum_{i=1}^n (x_i - \mu_x) * (y_i - \mu_y)$$



$X \uparrow$ $Y \downarrow = -ve.$

$$= (+ve) * (-ve) = (-ve)$$

$$= (-ve) * (+ve) = (-ve)$$