Assignment -> 3rd July -2022 : stats

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Sample data = 500 = S

Taken, n = 30 & $\alpha = 0.05$

confidence interval = CI = 95%

T-shirts = 300 XL, 200 L

$\bar{x} = 300$

Forluma = $\bar{x} \pm t\alpha/2 \left[\frac{s}{\sqrt{n}}\right]$

$\alpha/2 = \frac{0.05}{2} = 0.025$

$t_{0.025}$ = By refering T-Table the value is = 2.045

DOF = Degree of freedom = 30 - 1 = 29.

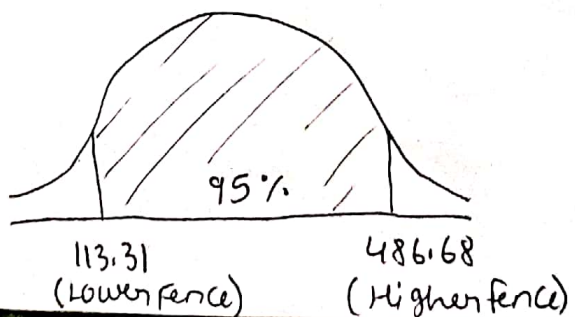
$t_{0.025} = 2.045$.

* Lower Fence

$\therefore 300 - 2.045 \left[\frac{500}{\sqrt{30}}\right] = 113.31$

* Higher fence

$300 + 2.045 \left[\frac{500}{\sqrt{30}}\right] = 486.68$



Now, $\bar{x} = 200$

Formula $= \bar{x} \pm t\alpha/2 \left[s/\sqrt{n} \right]$

Lower fence $= 200 - 2.045 \left[\frac{500}{\sqrt{30}} \right] = 13.31$

Higher fence $= 200 + 2.045 \left[\frac{500}{\sqrt{30}} \right] = 386.68$