

Assignment 1. [3rd July] stats day 5

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Q:-

$$S = 500$$

$$\alpha =$$

$$\text{assume } n = 30$$

$$\alpha = 0.05$$

$$c.I = 95\%$$

$$\text{Tshirts} = 300 \times L \quad 200 \times L.$$

$$\textcircled{1} \text{ Formula. } = \bar{X} \pm t_{\alpha/2} \left[\frac{S}{\sqrt{n}} \right].$$

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

By referring t table

for ~~n=3~~

$$\begin{aligned} \text{Degree of freedom} &= n - 1 \\ &= 30 - 1 \\ &= 29 \end{aligned}$$

From table

$$29 \rightarrow 2.045 \rightarrow t_{0.025}$$

lower fence

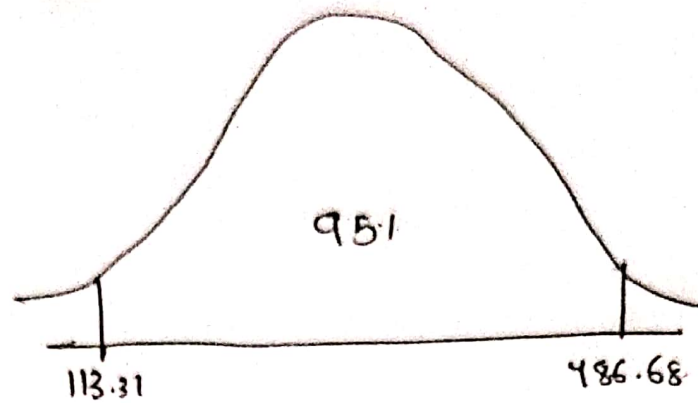
$$= 300 - 2.045 \left[\frac{500}{\sqrt{30}} \right]$$

$$= 113.31$$

higher fence

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

$$= 486.68.$$



$$(ii) \quad \bar{x} \pm t_{\alpha/2} \left[\frac{s}{\sqrt{n}} \right]$$

lower fence

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

$$= 13.31$$

higher fence

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

$$= 386.68$$

