

Assignment - 5

1000 employees

$$n = 500$$

300 X2

200 L

95% CI

consider X2 as 1 & L as 0

$$\text{Mean of Sample} = \frac{300}{500} = \frac{3}{5}$$

$$\begin{aligned} \text{Deviation of sample} &= \sqrt{\left(\frac{2}{5}\right)^2 \times 300 + \left(\frac{3}{5}\right)^2 \times 200} \\ &= \frac{\sqrt{500}}{5} \\ &= 0.489 \end{aligned}$$

Considering t test

$$\begin{aligned} \text{upper fence } \bar{x} + t_{\alpha/2} \left(\frac{s}{\sqrt{n}} \right) &= \frac{3}{5} + \frac{(2.064)(0.489)}{100} \\ &= 0.61 \end{aligned}$$

Lower fence

$$\bar{x} - t_{\alpha/2} \left(\frac{s}{\sqrt{n}} \right) = 0.589$$

X2 shifts should be between 58.9k and 61k

2 shifts should be

between 39k and 41.1k

and give interval

Phone/Email/Notes

Notes

SEPTEMBER

M	3	10	17	24
T	4	11	18	25
W	5	12	19	26
T	6	13	20	27
F	7	14	21	28