MATH-120

12/06/2021 ONLINE EXAM #4

1. Ans Did it online itself

2. Ans Did it online itself

3. Ans: $z = \frac{\hat{p} - p}{\sqrt{\frac{pq}{n}}}$

$\hat{p} = \frac{515}{815}$

$= 0.6319018$

$z = \frac{0.1319018}{0.017514236}$

$= 7.53112154$

Did the remaining problem online itself.

4. Ans. Do it online itself.

5. Ans:- $n = 15$

$$t = \frac{\bar{x} - \mu_{\bar{x}}}{\frac{s}{\sqrt{n}}}$$

$$= \frac{2.466666}{\frac{19.838 19467}{\sqrt{15}}}$$

$$= 0.48$$

Solved the remaining part online.

6. Ans Solved this online itself.

7. Ans. $\chi^2 = \frac{(n-1)s^2}{\sigma^2}$

$$= \frac{26 \cdot (0.0027)^2}{(0.004)^2}$$

$$= \frac{0.000189954}{0.000016} = 11.84$$

625

solved the remaining part online.

8 Ans :- solved it online itself.

9. Ans :- solved it online itself.

10. Ans $$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

$$= \frac{0.72}{0.183543003\,64}$$

$$t = 3.922786\,4080$$

p-value = 0.000 (did it online)

$$E = t_{\alpha/2} \sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$$

$$= 2.4377 \times (0.183543003\,64)$$

$$= 0.447422\,77799$$

$$0.72 - 0.447422\,77 < \mu_1 - \mu_2 < 0.72 + 0.4474$$

$$0.28 < \mu_1 - \mu_2 < 1.17$$

11. Ans Solved it online itself.

12 Ans Solved it online itself.

13 Ans :- Solved it online itself

14 Ans :- Solved it online itself.