William Misael Ramirez López

Ejercicio 1

Formula $IC = \bar{x}_1 - \bar{x}_2 \pm Z\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$

$n_1 = 130$ $n_2 = 130$

$\bar{x}_1 = 60$ $x_2 = 50$

$s_1 = 3$ $s_2 = 2$

$Z = 95\% = 1.96$

$$IC = 60 - 50 \pm 1.96\sqrt{\frac{(3)^2}{130} + \frac{(2)^2}{130}}$$

$$= 10 \pm 1.96\sqrt{0.069 + 0.0307}$$

$$= 10 \pm 1.96\sqrt{0.0997}$$

$$= 10 \pm 1.96(0.3160)$$

$$= 10 \pm 0.6193$$

$$= 10 + 0.6193 = 9.3807$$

$$= 10 - 0.6193 = 10.6193$$

En conclusion las horas Promedio del trabajo en Finanzas y recursos humanos es de 9.3807 y 10.6193

Ejercicio 2

$n_1 = 40 \quad n_2 = 40$ $\quad Z = 98\% \quad 2.33$

$x_1 = 5000 \quad x_2 = 3,500$

$s^2 = 600 \quad 6^2 = 700$

$$1c = 5000 - 3,500 \pm 2.33\sqrt{\frac{600}{40} + \frac{700}{40}}$$

$$= 1500 \pm 2.33\sqrt{15 + 17.5}$$

$$= 1500 \pm 2.33\sqrt{32.5}$$

$$= 1500 \pm 2.33\,(5.7008)$$

$$= 1500 \pm 13.2828$$

$1500 + 13.2828 = 1,513.2828$

$1500 - 13.2828 = 1,486.7172$

En conclusión se deposita en el banco 1,513.7828 y 1,486.7172

Ejercicio 3

$n_1 = 150$ $\quad n_2 = 150$ $\quad z = 90\% = 1.645$

$p_1 = 90/150 = 0.6$ $\quad p_2 = 75/150 = 0.5$

$q_1 = 1 - 0.6 = 0.4$ $\quad q_2 = 1 - 0.5 = 0.5$

$$0.6 - 0.5 \pm 1.645 \sqrt{\frac{(0.6)(0.4)}{150} + \frac{(0.5)(0.5)}{150}}$$

$$0.1 \pm 1.645 \sqrt{0.0016 + 0.0016}$$

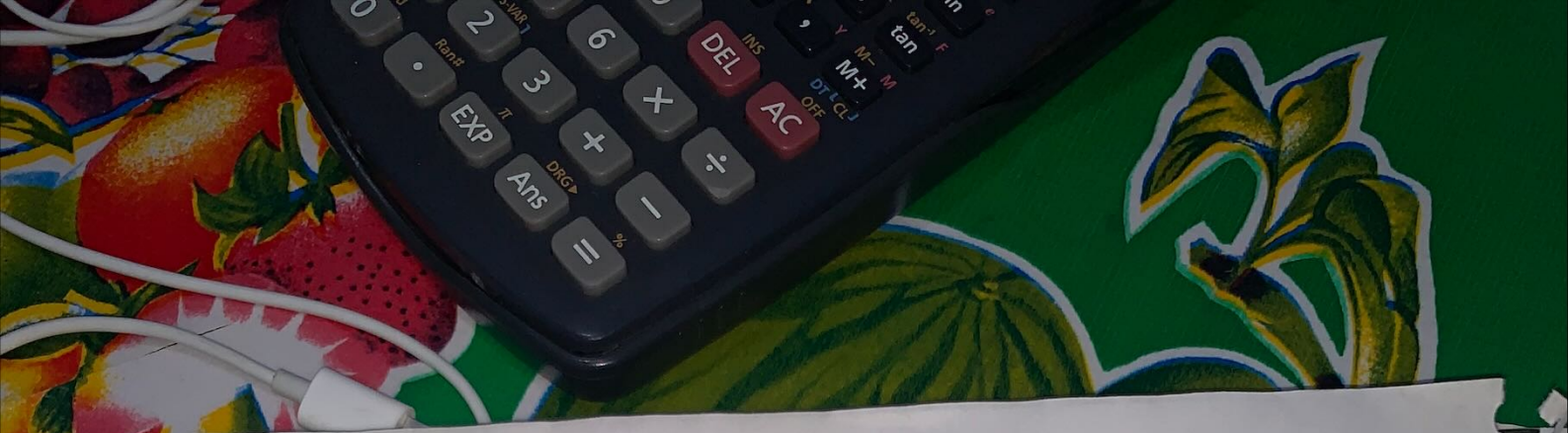
$$0.1 \pm 1.645 (0.0566)$$

$$0.1 \pm 0.0684$$

$$0.1 + 0.0684 = 0.1684$$

$$0.1 - 0.0684 = 0.0316$$

Los de la colonia tenían razón



Ejercicio 4

$n_1 = 800$ $n_2 = 400$

$P_1 = 679/800 = 0.848$ $P_2 = 260/400 = 0.65$

$q_1 = 1 - 0.848 = 0.152$ $q_2 = 1 - 0.65 = 0.35$

$94\%\ 20 = 1.88$

$$0.848 - 0.65 \pm 1.88 \sqrt{\frac{(0.848)(0.152)}{800} + \frac{(0.65)(0.35)}{400}}$$

$$0.198 \pm 1.88 \sqrt{0.0001 + 0.0005}$$

$$0.198 \pm 1.88 (0.0105)$$

$$0.198 \pm 0.0197$$

$$0.198 + 0.0197 = 0.2177$$

$$0.198 - 0.0197 = 0.1783$$