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**Nombre del trabajo: Intervalo de
confianza para la diferencia de
medidas**

Materia: Estadística inferencial

Grado: 4 cuatrimestre

Grupo: A

Frontera Comalapa, Chiapas a 15 de noviembre de 2020.

Finanzas

Rec. Humanos

$$n_1 = 130$$

$$n_2 = 130$$

$$x_1 = 60$$

$$x_2 = 50$$

$$s_1 = 3$$

$$s_2 = 2$$

$$z = 98\% = 2.33$$

$$z = 98\% = 2.33$$

Intervalo

$$IC = (x_1 - x_2) \pm$$

Formula

$$IC = (x_1 - x_2) \pm z \left[\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}} \right] \text{ donde}$$

$$IC = (60 - 50) \pm 2.33 \left[\sqrt{\frac{(3)^2}{130} + \frac{(2)^2}{130}} \right]$$

$$IC = (10) \pm 2.33 \left[\sqrt{\frac{9}{130} + \frac{4}{130}} \right]$$

$$IC = 10 \pm 2.33 \left[\sqrt{0.0692 + 0.0307} \right]$$

$$IC = 10 \pm 2.33 \left[\sqrt{0.0999} \right]$$

$$IC = 10 \pm 2.33 \left[0.3160 \right]$$

$$IC = 10 \pm 0.7362$$

$$IC = 10 - 0.7362 = 9.2638$$

$$10 + 0.7362 = 10.7362$$

Respuesta

$$IC = 9.2638 \text{ a } 10.7362$$

Sucursal A	Sucursal B
$n_1 = 40$	$n_2 = 40$
$\bar{x}_1 = 5,000$	$\bar{x}_2 = 3,500$
$S^2 = 600$	$S^2 = 7000$

Nivel de confianza
para ambos:
 $Z = 98\% = 2.33$

$$IC = (\bar{x}_1 - \bar{x}_2) \pm Z \left[\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}} \right]$$

$$IC = (5,000 - 3,500) \pm 2.33 \left[\sqrt{\frac{600}{40} + \frac{700}{40}} \right]$$

$$IC = 1,500 \pm 2.33 \left[\sqrt{15 + 17.5} \right]$$

$$IC = 1,500 \pm 2.33 \left[\sqrt{32.5} \right]$$

$$IC = 1,500 \pm 2.33 \left[5.7008 \right]$$

$$IC = 1,500 \pm 13.2828$$

$$IC = 1,500 - 13.2828 = 1,486.7172$$

$$IC = 1,500 + 13.2828 = 1,513.2828$$

Respuesta:

$$IC = 1,486.7172 \quad \text{a} \quad 1,513.2828$$