35 empleados

promedio = $133

desviación estandar = $6

95 %

$$IC = \bar{X} \pm 2\left[\frac{s}{\sqrt{n}}\right]$$

Datos

$n = 35$

$\bar{X} = 133$

$Z = 95\% = 1.96$

$s = 6$

Paso 1 $IC = 133 \pm 1.96\left[\frac{6}{\sqrt{35}}\right]$ 3.9116

Paso 2 $IC = 133 \pm 1.96\left[1.0141\right]$

Paso 3 $IC = 133 \pm 1.9876$

Paso 4 $IC = 133 - 1.9876 = 131.0124$

Paso 5 $IC = 133 + 1.9876 = 134.9876$

$IC = 131.0124$ a 134.9876

36 tiendas

promedio 12,000

desviación 800

Nivel de C 95%

$IC = \bar{X} \pm Z\left[\frac{S}{\sqrt{n}}\right]$

Datos

$n = 36$

$\bar{x} = 12{,}000$

$S = 800$

$Z = 95\% = 1.96$

Paso1 $IC = 12{,}000 \pm 1.96\left[\frac{800}{\sqrt{36}}\right]$

Paso2 $IC = 12{,}000 \pm 1.96\left[133.3333\right]$

Paso3 $IC = 12{,}000 \pm 261.3332$

Paso4 $IC = 12{,}000 \pm 261.3332$

$12{,}000 + 261.3332 = 12{,}261.3332$

$12{,}000 - 261.3332 = 11{,}738.6668$

$IC = 11{,}738.6668$ a $12{,}261.3332$

Nivel de confianza 95% (8 - 10 años)
muestra 150 y se encontro 87
el intervalo de confianza

Datos

$n = 150$

$z = 95\% = 1.96$

$P = 87/150 = 0.58$

$Q = 1 - 0.58 = 0.42$

$$IC = P \pm z\left[\sqrt{\frac{P(Q)}{n}}\right]$$

$$IC = 0.58 \pm 1.96\left[\sqrt{\frac{(0.58)(0.42)}{150}}\right]$$

$$IC = 0.58 \pm 1.96\left[\frac{0.2436}{150}\right]$$

$$IC = 0.58 \pm 1.96\left[0.04\right]$$

$$IC = 0.58 \pm 0.0784$$

$0.58 + 0.0784 = 0.6584 = 65.84$

$0.58 - 0.0784 = 0.5016 = 50.16$

IC = 50.16% a 65.84%

Nivel de confianza 99% 500ml

muestra 100 37% 500ml

¿Construye intervalo de confianza

$$IC = P \pm Z \left[\sqrt{\frac{P(Q)}{n}} \right]$$

Datos

$n = 100$

$Z = 99\% = 2.575$

$P = 37\% = 0.37$

$Q = 1 - 0.37 = 0.63$

$$IC = 0.37 \pm 2.575 \left[\sqrt{\frac{(0.37)(0.63)}{100}} \right]$$

$$= 0.37 \pm 2.575 \left[\sqrt{\frac{0.2331}{100}} \right]$$

$$IC = 0.37 \pm 2.575 \left[0.0479 \right]$$

$$IC = 0.37 \pm 0.1233$$

$IC = 0.37 + 0.1233 = 0.4933$

$0.37 - 0.1233 = 0.2467$

$IC = 0.2467$ a 0.4933

24.67% a 49.33%