



**Nombre del alumno:**

Brenda luz Vázquez morales

**Nombre del profesor:**

Joel herrera Ordoñez.

**Licenciatura:**

Lic. Contaduría publica

**Materia:**

Estadística inferencial

**Nombre del trabajo:**

Ejercicio, población finita población infinita

Frontera Comalapa, Chiapas a 18/102020.

DATOS

DATOS

$$z = 95\% = 1.96$$

$$e = 25\% = 0.05$$

$$P = 2\% = 0.02$$

$$q = 1 - P = 0.02 = 0.98$$

$$n = \frac{(z)^2 * P * q}{(e)^2}$$

$$n = \frac{(1.96)^2 * 0.02 * 0.98}{(0.05)^2}$$

$$n = \frac{3.8416 * 0.02 * 0.98}{0.0025}$$

$$n = \frac{0.0752}{0.0025} = 30.11 = 30$$

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DATOS

$$Z = 99\%$$

$$e = 11\% = 0.11$$

$$P = 0.5$$

$$Q = 1 - P = 0.5 = 0.5$$

$$n = \frac{(Z)^2 * P * Q}{(e)^2}$$

$$n = \frac{(2.575)^2 * 0.5 * 0.5}{(0.11)^2}$$

$$n = \frac{6.6306 * 0.5 * 0.5}{0.0121}$$

$$n = \frac{1.6576}{0.0112} = 136.99 = 136$$

③

$$N = 1340$$

$$Z = 97\% = 2.17$$

$$e = 8.5\% = 0.085$$

$$P = 31\% = 0.31$$

$$Q = 1 - P = 1 - 0.31 = 0.69$$

$$n = \frac{N * (Z)^2 * P * Q}{(N-1) * (e)^2 + (Z)^2 * P * Q}$$

$$n = \frac{1340 * (2.17)^2 * 0.31 * 0.69}{(1340-1) * (0.085)^2 + (2.17)^2 * 0.31 * 0.69}$$

$$n = \frac{1340 * 4.7089 * 0.31 * 0.69}{1339 * 0.0072 + 4.7089 * 0.31 * 0.69}$$

$$n = \frac{1,349.6931}{9.6408 + 1.0072}$$

$$n = \frac{1,349.6931}{10.648} = 126.75 = 126$$

(4)

DATOS

$$N = 2720$$

$$z = 96\% = 2.05$$

$$e = 4\% = 0.04$$

$$p = 58\% = 0.58$$

$$q = 1 - p = 1 - 0.58 = 0.42$$

$$n = \frac{N \times (z)^2 \times p \times q}{(N-1) \times (e)^2 + (z)^2 \times p \times q}$$

$$n = \frac{2720 (2.05)^2 \times 0.58 \times 0.42}{(2720-1) \times (0.04)^2 + (2.05)^2 \times 0.58 \times 0.42}$$

$$n = \frac{2720 \times 4.2025 \times 0.58 \times 0.42}{2719 \times 0.0016 + 4.2025 \times 0.58 \times 0.42}$$

$$n = \frac{2,784.5428}{4.3504 + 1.0237}$$

$$n = \frac{2,784.5428}{5.3741} = 518.141 = 518$$





