



***INDICE***

***PRESENTA: JOSÉ LUIS MORALES VELAZQUEZ***

***NOMBRE DEL MAESTR@: MAGNER JOEL HERRERA***

***NOMBRE DEL TRABAJO: ACTIVIDAD  
COMPLEMENTARIA 2***

***MATERIA: ESTADÍSTICA INFERENCIAL***

***GRADO: 4***

***GRUPO: "C"***

***FECHA DE ENTREGA: 18/10/2020***

## PLOBLACIÓN INFINITA

Datos

$$z = 95\% = 1.96$$

$$e = 5\% = 0.05$$

$$P = 2\% = 0.02$$

$$Q = 1 - P = 1 - 0.02 = 0.98$$

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

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

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

$$n = \frac{0.0752}{0.0025} = 30.08 = 30$$

2

Datos

$$z = 99\% = 2.575$$

$$e = 11\% = 0.11$$

$$P = 0.5$$

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

$$n = \frac{(z)^2 \times P \times Q}{(e)^2}$$

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

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

$$n = \frac{1.6576}{0.0121} = 136.9917 = 136$$

## POOBLACIÓN FINITA

(3)

Datos

$$N = 1340$$

$$Z = 97\% = 2.17$$

$$e = 8.5\% = 0.085$$

$$P = 31\% = 0.31$$

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

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

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

$$n = \frac{1340 * 4.7089 * 0.31 * 0.69}{1339 * 0.7225 + 4.7089 * 0.31 * 0.69}$$

$$n = \frac{1349.6931}{967.4275 + 1.0072}$$

$$n = \frac{1349.6931}{968.4347} = 1.3936 = 139$$

Datos

$$N = 2720$$

$$Z = 96\% = 2.05$$

$$e = 4\% = 0.04$$

$$P = 58\% = 0.58$$

$$Q = 1 - P = 1 - 0.58 = 0.42$$

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

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

$$n = \frac{2720 \times 4.2025 \times 0.58 \times 0.42}{2719 \times 0.16 + 4.2025 \times 0.58 \times 0.42}$$

$$n = \frac{2,784.5428}{435.04 + 1.0237} =$$

$$n = \frac{2,784.5428}{436.0637} = 6.3856 = 6$$