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**Nombre del trabajo: MUESTREO**

**Materia: Estadística Inferencial**

**Grado: 4°**

**Grupo: LPS19EMC0120-A**

Roxana de los Angeles Gutiérrez Méndez 4:

①  $N = 45000$   $D = \frac{(0.03)^2}{4} = 0.000225$   
 $p_1 = 50\% = 0.5$   
 $q_1 = 0.5$   
 $n = 1085$   
 $p_2 = 68.5\% = 0.685$   
 $q_2 = 1 - p = 0.315$   
 $\alpha = 5\%$   
 $n = 343$

$$n = \frac{(45000)(0.5)(0.5)}{(44,999)(0.000225) + (0.5)(0.5)} = 1085$$
$$D = \frac{(0.05)^2}{4} = 0.000625$$
$$n = \frac{(45000)(0.685)(0.315)}{(44,999)(0.000625) + (0.685)(0.315)} = 343$$

②  $N = 60000$   $D = \frac{(0.05)^2}{4} = 0.000625$   
 $p = 72\% = 0.72$   
 $q = 1 - p = 0.28$   
 $\alpha = 5\%$   
 $n = 321$

$$n = \frac{(60000)(0.72)(0.28)}{(59,999)(0.000625) + (0.72)(0.28)} = 321$$

Proxama de los Angeles Gutierrez Méndez 4°

①  $N = 50000$   
 $p_1 = 65\% = 0.65$   
 $q_1 = 1 - p = 0.35$   
 $B_1 = 2\%$   
 $n_1 = 2177$

$$D = \frac{(0.02)^2}{4} = 0.0001$$
$$n = \frac{(50000)(0.65)(0.35)}{(49,999)(0.0001) + (0.65)(0.35)} = 2177$$

$p_2 = 50\% = 0.5$   
 $q_2 = 1 - p = 0.5$   
 $B_2 = 5\%$   
 $n_2 = 1087$

$$D = \frac{(0.03)^2}{4} = 0.000225$$
$$n = \frac{(50000)(0.5)(0.5)}{(49,999)(0.000225) + (0.5)(0.5)} = 1087$$

②  $N = 10000$   
 $p_1 = 68\% = 0.68$   
 $q_1 = 1 - p = 0.32$   
 $B_1 = 5\%$   
 $n_1 = 337$

$$D = \frac{(0.05)^2}{4} = 0.000625$$
$$n = \frac{(10000)(0.68)(0.32)}{(9,999)(0.000625) + (0.68)(0.32)} = 337$$

$p_2 = 70\% = 0.7$   
 $q_2 = 1 - p = 0.3$   
 $B_2 = 4\%$   
 $n_2 = 449$

$$D = \frac{(0.04)^2}{4} = 0.0004$$
$$n = \frac{(10000)(0.7)(0.3)}{(9,999)(0.0004) + (0.7)(0.3)} = 449$$

③  $N = 70000$   
 $p = 65.5\% = 0.655$   
 $q = 1 - p = 0.345$   
 $B = 4\%$   
 $n = 561$

$$D = \frac{(0.04)^2}{4} = 0.0004$$
$$n = \frac{(70000)(0.655)(0.345)}{(69,999)(0.0004) + (0.655)(0.345)} = 561$$

Reserva de los Angeles Guillerme M6ndez 9.

④  $N = 12000$        $D = \frac{(0.03)^2}{4} = 0.000225$   
 $p = 50\% = 0.5$   
 $q = 1 - p = 0.5$        $n = \frac{(12000)(0.5)(0.5)}{(11,999)(0.000225) + (0.5)(0.5)} = 1018$   
 $B = 3\%$   
 $n = 1018$

⑤  $N = 25000$        $n = \frac{(0.02)^2}{4} = 0.0001$   
 $p = 75\% = 0.75$   
 $q = 1 - p = 0.25$        $D = \frac{(25000)(0.75)(0.25)}{(24,999)(0.0001) + (0.75)(0.25)} = 1745$   
 $B = 2\%$   
 $n = 1745$

⑥  $N = 165000$        $n = \frac{(0.04)^2}{4} = 0.0004$   
 $p = 66\% = 0.66$   
 $q = 1 - p = 0.34$   
 $B = 4\%$        $D = \frac{(165000)(0.66)(0.34)}{(164,999)(0.0004) + (0.66)(0.34)} = 560$   
 $n = 560$