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**Nombre del trabajo:** Muestreo Aleatorio

**Materia:** Estadística descriptiva

**Grado:** Cuarto cuatrimestre

**Grupo:** A

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Ejercicios

<p>N=18000  P1=65.7%  q1=  B1=2%  n1=  p2=77%  q2=  B2=4%  n2=</p>	<p>N=55000  P1=55.8%  q1=  B1=2%  n1=  p2=62.5%  q2=  B2=3%  n2=</p>
<p>N=50000  P1=56.7%  q1=  B1=2%  n1=  p2=  q2=  B2=4%  n2=</p>	<p>N=35200  P1=72.5%  q1=  B1=2%  n1=  p2=  q2=  B2=1%  n2=</p>
<p>N=58000  P1=  q1=  B1=5%  n1=  p2=74%  q2=  B2=2%  n2=</p>	<p>N=17000  P1=65.7%  q1=  B1=2%  n1=  p2=77%  q2=  B2=4%  n2=</p>

Nota si no tiene valor de p entonces toma el valor de 0.5

$N = 50,000$   
 $p_1 = 56.7\% = 0.56$   
 $q_1 = 1 - 0.56 = 0.44$   
 $B_1 = 2\% = 0.02$   
 $n_1 = \frac{(50,000)(0.56)(0.44)}{(49,999)(0.0001)(0.56)(0.44)} = 2,349$   
 $p_2 = 0.51 = 0.005$   
 $q_2 = 1 - 0.005 = 0.995$   
 $B_2 = 4\% = 0.04$   
 $n_2 = \frac{(0.04)^2}{4} = 0.0004$   
 $D_1 = \frac{(0.04)^2}{4} = 0.0004$   
 $D_2 = \frac{(50,000)(0.005)(0.995)}{(49,999)(0.0004)(0.005)(0.995)} = 13$

$N = 35,200$   
 $p_1 = 72.5\% = 0.725$   
 $q_1 = 1 - 0.725 = 0.275$   
 $B_1 = 1\% = 0.01$   
 $n_1 = 34$

$p_2 = 0.51 = 0.005$   
 $q_2 = 1 - 0.005 = 0.995$   
 $B_2 = 4\% = 0.04$   
 $n_2 = 21$

$D_1 = \frac{(0.01)^2}{4} = 0.00025$   
 $n_1 = \frac{(35,200)(0.725)(0.275)}{(34,199)(0.00025)(0.725)(0.275)} = 34$

$D_2 = \frac{(0.04)^2}{4} = 0.0004$   
 $n_2 = \frac{(35,200)(0.005)(0.995)}{(34,199)(0.0004)(0.005)(0.995)} = 21$

①  $N = 18000$   
 $p_1 = 65.7\% = 0.657$   
 $q_1 = 1 - 0.657 = 0.343$   
 $B_1 = z_1 = 0.2$   
 $n = 7003$

$p_2 = 77\% = 0.77$   
 $q_2 = 1 - 0.77 = 0.23$   
 $B_2 = z_1 = 0.04$   
 $n = 433$

$D = \frac{(0.02)^2}{4} = 0.0001$

$n = \frac{(18000)(0.657)(0.343)}{(17999)(0.0001)(0.657)(0.343)} = 2,003$

$D = \frac{(0.04)^2}{4} = 0.0004$

$n = \frac{(18000)(0.77)(0.23)}{(17999)(0.0004)(0.77)(0.23)} = 433$

②  $N = 55,000$   
 $p_1 = 55.8\% = 0.558$   
 $q_1 = 1 - 0.558 = 0.442$   
 $B_1 = z_1 = 0.02$   
 $n_1 = 2,361$

$D_2 = \frac{(0.03)^2}{4} = 0.0008$

$n_2 = \frac{(55000)(0.675)(0.325)}{(54999)(0.0008)(0.675)(0.325)} = 771$

$D_1 = \frac{(0.02)^2}{4} = 0.0001$

$n_1 = \frac{(55,000)(0.558)(0.442)}{(54,999)(0.0001)(0.558)(0.442)} = 2,361$

⑤  $N = 58,000$   
 $p_1 = 0.51 = 0.005$   
 $q_1 = 1 - 0.005 = 0.995$   
 $B_1 = z_1 = 0.05$   
 $n = 8$

$p_2 = 74 = 0.74$   
 $q_2 = 1 - 0.74 = 0.26$   
 $B_2 = z_1 = 0.02$   
 $n = 1,863$

$D_1 = \frac{(0.03)^2}{4} = 0.000625$

$n_1 = \frac{(58000)(0.005)(0.995)}{(57999)(0.000625)(0.005)(0.995)} = 8$

$D_2 = \frac{(0.02)^2}{4} = 0.0001$

$n_2 = \frac{(58000)(0.74)(0.26)}{(57999)(0.0001)(0.74)(0.26)} = 1,863$

⑥  $N = 17000$   
 $p_1 = 65.7\% = 0.657$   
 $q_1 = 1 - 0.657 = 0.343$   
 $B_1 = z_1 = 0.02$   
 $n = 1990$

$p_2 = 77\% = 0.77$   
 $q_2 = 1 - 0.77 = 0.23$   
 $B_2 = z_1 = 0.04$   
 $n = 432$

$D_1 = \frac{(0.02)^2}{4} = 0.0001$

$n = \frac{(17000)(0.657)(0.343)}{(16999)(0.0001)(0.657)(0.343)} = 1990$

$D_2 = \frac{(0.04)^2}{4} = 0.0004$

$n = \frac{(17000)(0.77)(0.23)}{(16999)(0.0004)(0.77)(0.23)} = 432$

