

$$\begin{array}{cc} (.20, .30) \\ \uparrow \quad \uparrow \\ LB \quad UB \end{array}$$

$$\hat{p} = \frac{LB + UB}{2} = \frac{.20 + .30}{2} = \frac{.50}{2} = 0.25$$

$$E = UB - \hat{p} = .30 - .25 = .05$$

3. $LB = 0.20, UB = 0.40, n = 200$

① POINT ESTIMATE $\hat{p} = \frac{LB + UB}{2} = \frac{0.20 + 0.40}{2} = \frac{0.60}{2} = 0.30$

② MARGIN OF ERROR (E)

$$E = UB - \hat{p} = 0.40 - 0.30 = 0.10$$

③ $X = ?$

$$\hat{p} = \frac{X}{n}$$

$$.30 = \frac{X}{200}$$

$$200(.30) = X$$

$$60 = X$$