

Σ ed. 3, ex. 4.02

Q1 $\sigma = 14$

CI = 90%

$e = 2$

$\alpha = 0.90, \quad \frac{\alpha}{2} = 0.45$

$\rightarrow Z_{\frac{\alpha}{2}}^* = 1.645$

Sol/ $Z_{\frac{\alpha}{2}}^* \times \frac{\sigma}{\sqrt{n}} < e$

$\rightarrow 1.645 \times \frac{14}{\sqrt{n}} < 2$ Square both sides

$\rightarrow \frac{(1.645 \times 14)^2}{n} < 4$

$\rightarrow 530.38 \div 4 = n$

$\rightarrow \underline{132.5}$ rounds to 133