Content:

⑨ $e=\frac{\sigma}{\sqrt{n}} \times z_{\frac{\alpha}{2}}$

(1) $\sigma=3$ $e=0.5$ $1-\alpha=0.95$

$n=(\frac{3}{0.5})^2 \times 1.96^2 = 138.3$

$\fallingdotseq 139$

(2) $\sigma=0.2$ $e=0.03$ $1-\alpha=0.9$

$n=(\frac{0.2}{0.03})^2 \times 1.645^2 = 120.27$

$\fallingdotseq 121$

(3) $\sigma=0.05$ $e=0.02$ $1-\alpha=0.98$

$n=(\frac{0.05}{0.02})^2 \times 2.326^2 = 33.8$

$\fallingdotseq 34$

⑧ $1250 \pm z_{0.025}\sqrt{\frac{140^2}{120}}$

$=1250 \pm 25.05$

$\rightarrow (1224.95, 1275.05)$

⑩

(1) $\mu_1-\mu_2 = \bar{x}-\bar{y} = 85-78 = 7$

(2) $7 \pm 1.645\sqrt{\frac{154}{50}+\frac{146}{40}}$

$=7 \pm 1.645 \times 2.59$

$=7 \pm 4.26$

$\therefore (2.74, 11.26)$