

$$\textcircled{3} \quad n=10 \quad \bar{x}=13.63 \quad S=6.05 \quad n-1=9 \quad 1-\alpha=0.98 \quad \frac{\alpha}{2}=0.01$$

$$\bar{x} \pm t_{\frac{\alpha}{2}}(n-1) \frac{S}{\sqrt{n}} = 13.63 \pm t_{0.01}(9) \frac{6.05}{\sqrt{10}}$$

$$= 13.63 \pm 2.821 \times 1.91$$

$$= 13.63 \pm 5.39$$

$$(8.24, 19.02)$$

④

$$11) \quad 0.33 \pm z_{\frac{\alpha}{2}} \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}$$

$$= 0.33 \pm 2.327 \times \sqrt{\frac{0.33 \times 0.67}{1200}}$$

$$= 0.33 \pm 0.3$$

$$= (0.30, 0.36)$$

$$\textcircled{2} \quad \hat{p} = \frac{650}{820} = 0.79 \quad \frac{\alpha}{2} = 0.025$$

$$0.79 \pm 1.96 \times \sqrt{\frac{0.79 \times 0.21}{820}}$$

$$= 0.79 \pm 1.96 \times 0.014$$

$$= 0.79 \pm 0.03$$

$$\Rightarrow (0.76, 0.82)$$

⑭

$$n=15 \quad \bar{x}=1.73 \quad S=0.8 \quad 1-\alpha=0.95 \quad t_{\frac{\alpha}{2}}(n-1)$$

$$= t_{0.025}(14)$$

$$= 2.14$$

$$1.73 \pm t_{0.025}(14) \frac{0.8}{\sqrt{15}}$$

$$= 1.73 \pm 2.145 \times \frac{0.8}{\sqrt{15}}$$

$$= 1.73 \pm 0.44$$

$$\Rightarrow (1.29, 2.17)$$

$$1.73 \pm t_{0.10}(14) \frac{0.8}{\sqrt{15}}$$

$$= 1.73 \pm 1.345 \frac{0.8}{\sqrt{15}}$$

$$= 1.73 \pm 0.28$$

$$\Rightarrow (1.45, 2.01)$$