

例 6.7. A106230280 杯字軒.

$$(1) \quad 1-\alpha = 0.95, \quad \frac{\alpha}{2} = 0.025, \quad Z_{\frac{\alpha}{2}} = 0.025 = 1.96.$$

$$\begin{aligned} \mu \pm 95\% \text{ 信賴區間} &= \bar{X} \pm Z_{\frac{\alpha}{2}} \frac{S}{\sqrt{n}} = 16.33 \pm 1.96 \frac{4.29}{\sqrt{36}} \\ &= 16.33 \pm 1.4 \\ &= \underline{(14.93, 17.33)} \end{aligned}$$

$$(2) \quad 1-\alpha = 0.9, \quad \frac{\alpha}{2} = 0.05, \quad Z_{\frac{\alpha}{2}} = 0.05 = 1.645.$$

$$\begin{aligned} \mu \pm 90\% \text{ 信賴區間} &= \bar{X} \pm Z_{\frac{\alpha}{2}} \frac{S}{\sqrt{n}} = 16.33 \pm 1.65 \frac{4.29}{\sqrt{36}} \\ &= 16.33 \pm 1.18 \\ &= \underline{(15.15, 17.51)} \end{aligned}$$