

# Week 11 課堂作業

7-4

$$\begin{aligned} H_0 &= \mu = 30 \\ H_1 &= \mu \neq 30 \\ \alpha &= 0.05 \end{aligned}$$

棄原域 C

$$= \{ |Z| > z_{0.025} \}$$

$$= \{ |Z| > 1.96 \}$$

$$Z = \frac{\bar{X} - \mu_0}{\frac{s}{\sqrt{n}}} = \frac{30.563 - 30}{\frac{2.354}{\sqrt{64}}} = 1.913$$

$$\begin{aligned} p\text{值} &= 2P(Z > 1.913) \\ &\approx 2P(Z > 1.91) \\ &= 2 \times 0.0281 \\ &= 0.0562 > \alpha \end{aligned}$$

→ 接受  $H_0$

7-5

$$H_0 = \mu \leq 55$$

$$\bar{x} = 59.3125$$

$$H_1 = \mu > 55$$

$$\alpha = 0.05$$

$$① T = \frac{\bar{X} - \mu_0}{\frac{s}{\sqrt{n}}}$$

$$= \frac{59.3125 - 55}{\frac{13.189}{\sqrt{16}}} = 1.308$$

棄原域 C

$$= \{ T > t_{0.05}(16-1) \} \rightarrow \text{接受 } H_0$$

$$= \{ T > 1.753 \}$$