

$$7.11 \quad (1) H_0: \frac{\sigma_1^2}{\sigma_2^2} = 1 \quad H_1: \frac{\sigma_1^2}{\sigma_2^2} \neq 1$$

$$(2) \alpha = 0.1$$

(3) 棄却域 C

$$= \{ F < F_{1-\frac{\alpha}{2}}(n_1-1, n_2-1) \text{ 或 } F > F_{\frac{\alpha}{2}}(n_1-1, n_2-1) \}$$

$$= \{ F < F_{0.95}(9, 7) \text{ 或 } F > F_{0.05}(9, 7) \}$$

$$= \{ F < 0.304 \text{ 或 } F > 3.683 \}$$

$$(4) F = \frac{S_1^2}{S_2^2} = \frac{0.653^2}{0.627^2} = 1.085$$