

例 7.11

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

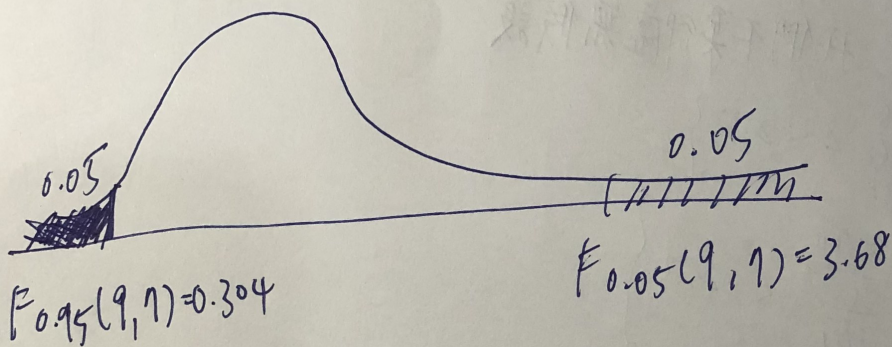
$$(2) \alpha = 0.1$$

$$(3) \text{ 棄卻域 } C = \{F < F_{1-\frac{\alpha}{2}}(n_1-1, n_2-1) \text{ 或 } F > F_{\frac{\alpha}{2}}(n_1-1, n_2-1)\}$$

$$= \{F < F_{0.95}(9, 7)\}$$

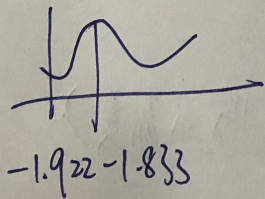
$$= \{F < 0.304 \text{ 或 } F > 3.68\}$$

$$(4) F = \frac{S_1^2}{S_2^2} = \frac{0.653^2}{6.627} = 1.085$$



$$H_0: \mu \geq 198, H_1: \mu < 198, \alpha = 0.05, t_{0.05}(9) = 1.833$$

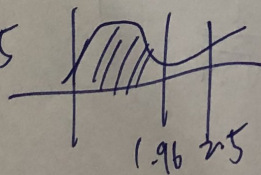
$$\frac{190 - 198}{\frac{13.12}{\sqrt{10}}} = -1.922$$



拒絕 $H_0 \Rightarrow$ 合格.

$$H_0: m = 420, H_1: m \neq 420, \alpha = 0.05, \frac{\alpha}{2} = 0.025$$

$$z_{0.05} = 1.96, \frac{423 - 420}{\frac{12}{\sqrt{100}}} = 2.5$$



拒絕 $H_0 \Rightarrow$ 規格改善