

7.3 sol: (1)  $H_0: \mu = 30, H_1: \mu \neq 30$

(2)  $\alpha = 0.05$

(3) 棄卻域  $C = \{|Z| > z_{\alpha/2}\} = \{|Z| > 1.96\}$

(4)  $Z = \frac{\bar{x} - \mu_0}{\frac{s}{\sqrt{n}}} = \frac{30.563 - 30}{\frac{2.354}{\sqrt{64}}} = 1.913$

7.4 求例 7.3 的 p-值

p-值 =  $2P(Z > 1.913)$

$\approx 2P(Z > 1.91)$

$= 2 \times 0.0281$

$= 0.0562 > \alpha$

所以，我們不棄卻虛無假設

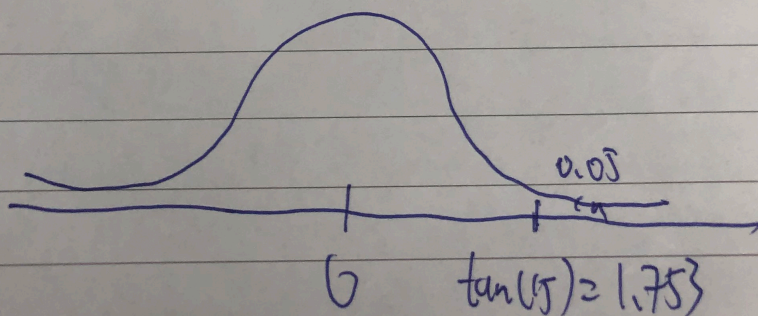
7.5 sol:  $n=16$ , 為小樣本且母體標準差  $\sigma$  未知，因此，對母體平均  
兩段檢定 + 檢定，

(1)  $H_0: \mu \leq 55, H_1: \mu > 55$

(2)  $\alpha = 0.05$

(3) 棄卻域  $C = \{T > t_{\alpha/2}(15)\} = \{T > 1.753\}$

(4)  $T = \frac{\bar{x} - \mu_0}{\frac{s}{\sqrt{n}}} = \frac{59.312 - 55}{\frac{12.187}{\sqrt{16}}} = 1.308$





ポリプロピレン製  
POLYPROPYLENE  
ペンケース・模型  
PEN CASE  
★ 既製・36×20mm  
L/ APPROX. 18×6×25mm  
MIDORI 無印良品  
4547515812227

新価格  
\$ 69

NO.

CHAPTER 7  
假設検定

NO.

DATE

7.6  $H_0 = \mu_1 - \mu_2 = 0$

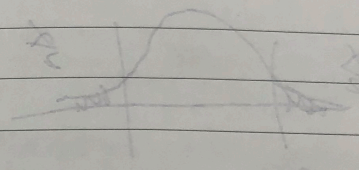
$\mu_1 - \mu_2 < 0$

$\alpha = 0.05$

棄却域  $C = \{Z < -z_{\alpha}\} = \{Z < -1.645\}$

1分

(4)  $Z = \frac{\bar{x} - \bar{y}}{\sigma}$



5分 1分

$0 \neq 54 - 19, H_0 = 54 - 19 \neq 0$  棄却域  $C = \{Z < -1.645\}$

$(S - n + n) \pm t \leq |T| \} = 0$  棄却域  $C = \{Z < -1.645\}$

$\{Z < -1.645\}$

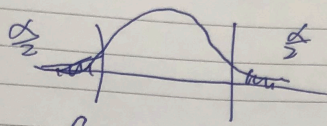
$\{Z < -1.645\}$

$\{Z < -1.645\}$

$54 - 19 \neq 0$

$$\star b\bar{x} = \frac{b}{\frac{1}{\bar{x}}}$$

HP值



临界值1 临界值2

7.7 sol:  $H_0: \mu_1 - \mu_2 = 0, H_1: \mu_1 - \mu_2 \neq 0$

(2)  $\alpha = 0.05$

(3) 接受域或拒绝域  $C = \{ |T| > t_{\alpha/2}(n_1 + n_2 - 2) \}$

$$= \{ |T| > t_{0.025}(16) \}$$

$$= \{ |T| > t_{0.025}(16) \}$$

$$= \{ |T| > 2.120 \}$$

$$(4) S_p = \sqrt{\frac{9 \times 0.653^2 + 7 \times 0.627^2}{10 + 8 - 2}}$$

$$T = \frac{7.728 - 7.546}{0.642 \sqrt{\frac{1}{10} + \frac{1}{8}}} = 0.598$$