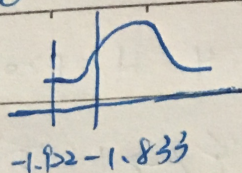


Date.

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

$$\frac{190 - 198}{\frac{13.16}{\sqrt{10}}} = -1.922$$

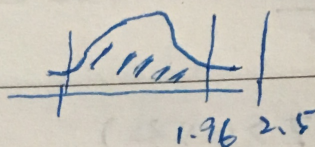


拒絕 $H_0 \Rightarrow$ 合格

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

$$Z_{0.025} = 1.96$$

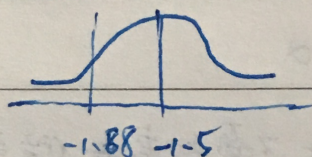
$$\frac{423 - 420}{\frac{1.2}{\sqrt{100}}} = 2.5$$



拒絕 $H_0 \Rightarrow$ 規格改變

3. $H_0: m \geq 70$ $H_1: m < 70$ $Z_{0.03} = -1.88$

$$\frac{68.5 - 70}{\frac{6}{\sqrt{36}}} = -1.5$$



不拒絕 $H_0 \Rightarrow$ 成績沒有不如去年

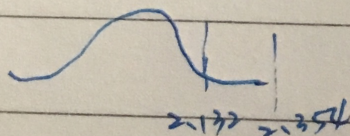
4. $P(Z < -1.5)$

$$= 0.0668 > 0.03 \Rightarrow \text{不拒絕 } H_0$$

5. $H_0: m \leq 1.5$ $H_1: m > 1.5$

$$t_{0.05}(4) = 2.132$$

$$\frac{1.52 - 1.5}{\frac{0.019}{\sqrt{5}}} = 2.354$$



拒絕 $H_0 \Rightarrow$ 超標合格

例 2.11

$$H_1 = \frac{\sigma_1^2}{\sigma_2^2} \neq 1 \quad H_0 = \frac{\sigma_1^2}{\sigma_2^2} = 1$$

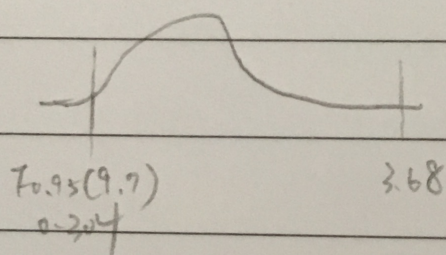
$$\alpha = 0.1$$

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

$$= F_{0.95}(9, 7) \quad F_{0.05}(9, 7)$$

$$= \{F < 0.304, F > 3.68\}$$

$$F = \frac{0.653^2}{0.627^2} = 1.085$$



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