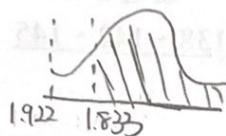


1 $H_0: m \geq 198$, $H_1: m < 198$, $\alpha = 0.05$

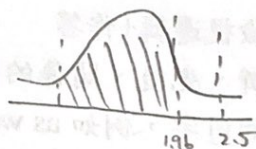
$$\frac{190 - 198}{\frac{13.16}{\sqrt{10}}} = -1.922$$



$t_{0.05}(9) = 1.833$ 拒絕 $H_0 \rightarrow$ 合格

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

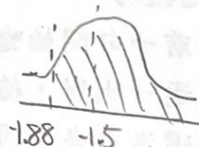
$$Z_{0.025} = 1.96, \quad \frac{423 - 420}{\frac{12}{\sqrt{100}}} = 2.5$$



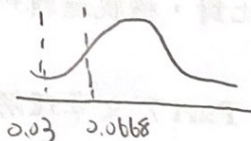
拒絕 $H_0 \rightarrow$ 規格改變

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

$$\frac{68.5 - 70}{\frac{6}{\sqrt{36}}} = -1.5 \text{ 不拒絕 } H_0 \rightarrow \text{成績沒有不如去年}$$



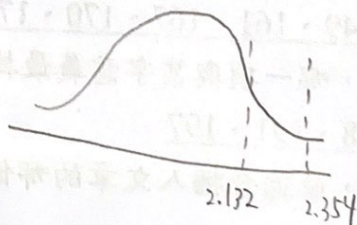
4. $P(Z < -1.5) = 0.0668 > 0.03 \rightarrow$ 不拒絕 H_0



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

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

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



拒絕 $H_0 =$ 超標合格