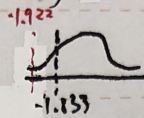


1. $H_0: m \geq 198$, $H_1: m < 198$

$\alpha = 0.05$ $t_{0.05}(9) = -1.833$

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

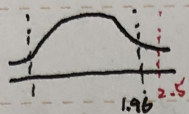


拒絕 $H_0 \Rightarrow$ 合格

2. $H_0: m = 420$, $H_1: m \neq 420$

$\alpha = 0.05$, $\frac{\alpha}{2} = 0.025$, $z_{0.025} = 1.96$

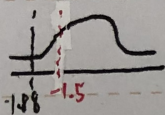
$\frac{423 - 420}{\frac{13}{\sqrt{100}}} = 2.5$



拒絕 $H_0 \Rightarrow$ 規格改變

3. $H_0: m \geq 70$, $H_1: m < 70$

$z_{0.03} = -1.88$ $\frac{68.5 - 70}{\frac{6}{\sqrt{32}}} = -1.5$

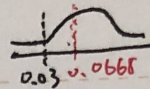


不拒絕 H_0

\Rightarrow 成績沒有不如去年

4. $P(Z < -1.5) = 0.0668 > 0.03$

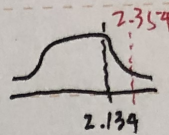
\Rightarrow 不拒絕 H_0



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

$t_{0.05}(4) = 2.132$

$\frac{1.52 - 1.5}{\frac{0.079}{\sqrt{5}}} = 2.354$



拒絕 $H_0 \Rightarrow$ 超標不合格