

# Week 10

1.  $H_0: m \geq 198$

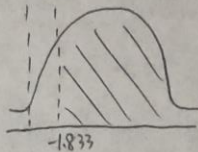
$$\frac{190-198}{\frac{13.16}{\sqrt{10}}} = -1.922$$

$H_1: m < 198$

$\alpha = 0.05$

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

拒絕  $H_0 \Rightarrow$  合格



2.  $H_0: m = 420$

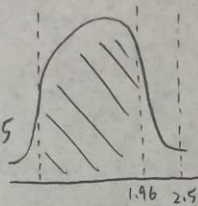
$H_1: m \neq 420$

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

$Z_{0.025} = 1.96$

$$\frac{423-420}{\frac{12}{\sqrt{100}}} = 2.5$$

拒絕  $H_0 \Rightarrow$  規格改變



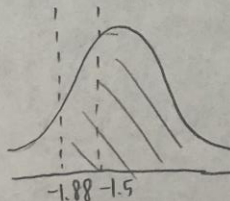
3.  $H_0: m \geq 70$

$H_1: m < 70$

$Z_{0.03} = -1.88$

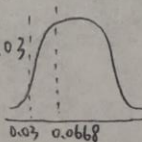
$$\frac{68.5-70}{\frac{6}{\sqrt{36}}} = -1.5$$

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.  $H_0: m \leq 1.5$

$H_1: m > 1.5$

$t_{0.05}(4) = 2.132$

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

拒絕  $H_0 \Rightarrow$  超標不合格

