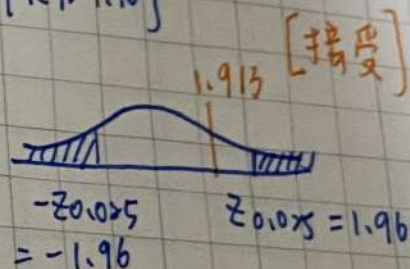


7.3 $H_0: \mu = 30$ $H_1: \mu \neq 30$, $\alpha = 0.05$

7.4 $C = \{|z| > z_{\frac{\alpha}{2}}\} = \{|z| > z_{0.025}\} = \{|z| > 1.96\}$

$$z = \frac{\bar{x} - \mu}{\frac{s}{\sqrt{n}}} = \frac{30.563 - 30}{\frac{2.354}{\sqrt{64}}} = 1.913$$



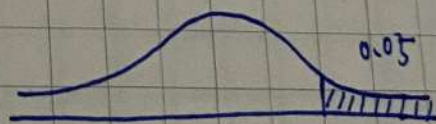
$$2P(z > 1.913) \approx 2P(z > 1.91)$$

P.S $P(z > 1.91) = 1 - P(z < 1.91) = 1 - 0.9719 = 0.0281$

$$= 2 \times 0.0281 = 0.0562 > \alpha \quad \therefore \text{接受 } H_0$$

7.5 $n=16$, $\alpha=0.05$

$H_0: \mu \leq 55$, $H_1: \mu > 55$ 右尾



棄卻域 C

$$T > t_{\alpha}(n-1)$$

$$\Rightarrow T > t_{0.05}(15)$$

$$\{T > 1.753\}$$

$$T = \frac{\bar{x} - \mu_0}{\frac{s}{\sqrt{n}}} = \frac{59.312 - 55}{\frac{13.189}{\sqrt{16}}} = \frac{4.31}{3.30} = 1.308$$

$$t_{0.05(15)} = 1.753$$

$$\bar{x} = \frac{949}{16} = 59.312, \quad s = \sqrt{\frac{\sum x_i^2 - n\bar{x}^2}{n-1}} = \sqrt{\frac{58891 - 5628.1}{15}} = 13.189$$

5625	6400	4225	2500
2025	900	3600	4096
3025	3364	3969	4624
1444	4356	4900	3844

$$P(T > 1.308) \approx P(T > 1.31)$$

P值約 0.1 ~ 0.25

$$p > 0.05$$

接受 H_0