概统第九章

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4. (1) 拒绝域：

$\left|\frac{\bar{x}-0}{1/\sqrt{10}}\right| > Z_{0.975}$

即 $|\bar{x}| > \frac{Z_{0.975}}{\sqrt{10}}$

即 $|\bar{x}| > 0.62$

∴ $C = 0.62$

(2) $\bar{x} = 1 > 0.62$

处于拒绝域

∴不能推断

(3) ~~$\left|\frac{\bar{x}-0}{1/\sqrt{10}}\right|$~~

由题

$\frac{Z_{1-\frac{\alpha}{2}}}{\sqrt{10}} = 1.15$

∴ $\alpha = 0.0003$

6. (1) ~~$\frac{28.75-26}{16/\sqrt{5.2}}$ ≥ 0.05~~

∵

$\frac{28.75-26}{5.2/\sqrt{16}} > 2.7 Z_{0.975}$

∴ H_0为假

(2) $\frac{28.75-26}{5.2/\sqrt{16}}$ ~~$= 2$~~ $< Z_{0.995}$

∴ ~~H_0为真~~

接受H_0

8. 取 $\chi^2 = \frac{9S^2}{\sigma_0^2} \sim \chi^2(n-1)$ 即 $\frac{1}{\sigma_0^2} \sim \chi^2(n-1)$

$H_0: \sigma^2 = \sigma_0^2$

(1) 拒绝域：

$D_1 = \left\{\frac{1}{\sigma_0^2} > \chi^2_{0.975}(9)\right\} \cup \left\{\frac{1}{\sigma_0^2} < \chi^2_{0.025}(9)\right\}$.

$\frac{1}{\sigma_0^2} \notin D_1$

∴ 接受H_0

(2) $H_1: \sigma^2 > \sigma_0^2$

$D_2 = \left\{\frac{1}{\sigma_0^2} > \chi^2_{0.95}(9)\right\}$

$\frac{1}{\sigma_0^2} \in D_2$

∴ 拒接H_1. ∴ 没有变大