

(3) $n=12, \sigma=9.$

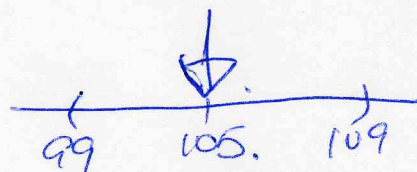
(a) 95% CI for μ

$$\begin{aligned} &= \bar{x} \pm Z_{\frac{\alpha}{2}} \frac{\sigma}{\sqrt{n}} \\ &= 104.1333 \pm 1.96 \frac{9}{\sqrt{12}} \\ &= (99.04, 109.2255). \end{aligned}$$

(b) $H_0: \text{mean } \mu = 105$

$H_a: \mu \neq 105.$

95% CI contains 105.



$\therefore$ NOT reject H_0 and conclude that there's no difference.

(4) Given: $\bar{x} = 531, n=10, s=82.79$

μ = mean rent

① $H_0: \mu$ NOT greater than 500.

$H_a: \mu > 500.$

② t-statistics

$$t = \frac{\bar{x} - \mu}{s/\sqrt{n}} = 1.195, \quad df=9.$$

③ p-value: t -statistics lies between 0.7 and 1.38
 $\therefore$ p-value lies between 0.10 and 0.25.
(look up the table).

④ Conclusion: $\therefore$ p-value $> 5\%$. NOT reject H_0 .