

1.

CLAIM: LOWER THAN 59

$$\begin{aligned}
 H_0: \mu &\geq 59 \quad (<, \geq, =) \\
 H_1: \mu &< 59 \quad (<, >, \neq)
 \end{aligned}$$

$$\mu = 59$$

$$n = 15$$

$$\bar{X} = 58$$

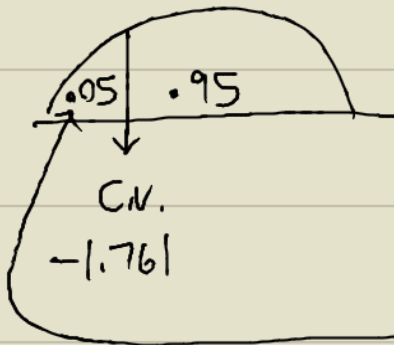
$$s = 1.2$$

$$\alpha = .05$$

$$DF = n - 1$$

$$DF = 15 - 1$$

$$DF = 14$$



$$\begin{aligned}
 \text{T.S.} \\
 t_0 &= \frac{\bar{X} - \mu_0}{\frac{s}{\sqrt{n}}}
 \end{aligned}$$

$$t_0 = \frac{(58 - 59)}{\left(\frac{1.2}{\sqrt{15}}\right)}$$

$$t_0 = -3.23$$

CONC: REJECT H_0
 ACCEPT H_1
 ACCEPT CLAIM

2.

CLAIM: DIFF THAN 59

$$\begin{aligned}
 H_0: \mu &= 59 \\
 H_1: \mu &\neq 59
 \end{aligned}$$

$$\mu = 59$$

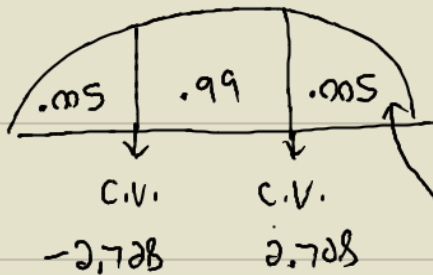
$$n = 35$$

$$\bar{X} = 63$$

$$s = 2.3$$

$$\alpha = .01$$

$$DF = 34$$



T.S.

$$t_0 = \frac{\bar{X} - \mu_0}{\frac{s}{\sqrt{n}}}$$

$$t_0 = \frac{(63 - 59)}{\left(\frac{2.3}{\sqrt{35}}\right)}$$

$$t_0 = 10.29$$

CONC: REJECT H_0
 ACCEPT H_1
 ACCEPT CLAIM