

Exo 1

$$s = 1000 \quad \mu_0 = 9000 \quad \bar{x} = 8000$$

$$n = 50$$

$$z = \frac{\bar{x} - \mu_0}{\frac{s}{\sqrt{n}}} \Rightarrow z = \frac{8000 - 9000}{\frac{1000}{\sqrt{50}}}$$

$$z = \frac{-1000}{\frac{1000}{\sqrt{50}}} \Rightarrow z = -1 \times \frac{\sqrt{50}}{1000}$$

$$z = -0,7071$$

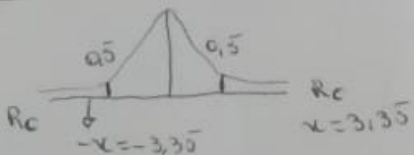
$$a) \quad n = 9, \quad \bar{x} = 400, \quad s = 60$$

$$\mu = 380$$

$$t_{obs} = \frac{\bar{x} - \mu}{\frac{s}{\sqrt{n}}}$$

$$t_{obs} = \frac{400 - 380}{\frac{60}{\sqrt{9}}} = \frac{20}{\frac{60}{3}}$$

$$t_{obs} = 1$$



não tem evidência no nível 1%

b) Para $s = 90$:

$$t_{obs} = \frac{400 - 380}{\frac{90}{\sqrt{9}}} \Rightarrow t_{obs} = 0,66$$

$$g.l. = n - 1 \Rightarrow g.l. = 9 - 1 = 8$$

$$x = 2,09 \Rightarrow t_{obs} \notin R_c$$

Exo 4

$$a) \quad H_0: \leq 0,02 \\ H_1: = 0,05$$

$$b) \quad \frac{10}{200} = 0,05 \Rightarrow p = 0,05$$

$$z = \frac{p - p_0}{\sqrt{\frac{p_0 q_0}{n}}} = \frac{0,05 - 0,02}{\sqrt{\frac{0,02 \times 0,98}{200}}}$$

$$z = 10,68$$

não aceita H_0 porque $\alpha = 0,05\%$

Exo 5

$$teste = \frac{(x_1 \ln n_1) - (x_2 \ln n_2)}{\sqrt{p(1-p)(\frac{1}{n_1} + \frac{1}{n_2})}}$$

$$\text{com } p = \frac{x_1 + x_2}{n_1 + n_2} \Rightarrow p = \frac{400}{200}$$

$$p = 4$$

$$teste = \frac{\frac{200}{45} - \frac{200}{55}}{\sqrt{4(1-4)(\frac{1}{45} + \frac{1}{55})}}$$

$$teste = \frac{0,81}{0,6}$$

$$teste = 1,36$$