

NO.

Date.

$$(2) \quad 1-\alpha = 0.9 \quad \frac{\alpha}{2} = 0.05 \quad \chi^2_{0.05}(8) = 15.51$$

$$\chi^2_{0.95}(8) = 2.73$$

$$5 \frac{8 \times 9.27^2}{15.51}, \quad 5 \frac{8 \times 9.27^2}{2.73} = (6.66, 15.87)$$

$$(3) \quad 1-\alpha = 0.9 \quad \frac{\alpha}{2} = 0.05 \quad F_{0.05}(8,8) = 3.44$$

$$F_{0.95}(8,8) = \frac{1}{F_{0.05}(8,8)} = 0.29$$

$$\left(\frac{9.27^2}{21.15^2} \times \frac{1}{3.44}, \quad \frac{9.27^2}{21.15^2} \times \frac{1}{0.29} \right)$$

$$= (0.06, 0.66)$$

NO.

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제 9.

$$n = 6 \quad \bar{x} = 14.33$$

(1)

$$s = \sqrt{\frac{\sum (x_i - \bar{x})^2}{5}} = \sqrt{\frac{\sum x_i^2 - n\bar{x}^2}{n-1}}$$

$$= \sqrt{\frac{1284 - 6 \times 14.33^2}{5}} = \sqrt{10.38} = 3.22$$

(2)

$$1 - \alpha = 0.9 \quad \frac{\alpha}{2} = 0.05 \quad \text{자유도 } n-1 = 5$$

$$\chi^2_{0.05}(5) = 11.07 \quad \chi^2_{1-\frac{\alpha}{2}}(n) = \chi^2_{0.95}(5) = 1.15$$

$$\left(\sqrt{\frac{5 \times 10.38}{11.07}}, \sqrt{\frac{5 \times 10.38}{1.15}} \right)$$

$$= (2.17, 6.72)$$

제 20

$$n_1 = 9 \quad \bar{x}_1 = 7.67 \quad s_1 = \sqrt{\frac{\sum x_i^2 - n\bar{x}^2}{8}} = \sqrt{85.94} = 9.27$$

$$n_2 = 9 \quad \bar{x}_2 = 6.78 \quad s_2 = 21.15$$

$$u = \left(\frac{9.27^2}{9} + \frac{21.15^2}{9} \right) / \left(\frac{9.27^2}{8} + \frac{21.15^2}{8} \right) = 10.96 \approx 11$$

(1)

$$(\bar{x} - \bar{y}) \pm t_{\frac{\alpha}{2}}(11) \sqrt{\frac{9.27^2}{9} + \frac{21.15^2}{9}}$$

$$= 0.89 \pm 2.201 \times 7.70 = 0.89 \pm 16.95$$

$$(-16.06, 17.84)$$