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M T W T F S S

⑨ (1)

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

$$=\sqrt{\frac{1284-6\times14.33^2}{5}}$$

$$=\sqrt{10.38}$$

$$=3.22$$

(2)

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

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

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

$$\left(\sqrt{\frac{(n-1)S^2}{\chi^2_{\frac{\alpha}{2}}(n-1)}},\sqrt{\frac{(n-1)S^2}{\chi^2_{\frac{\alpha}{2}}(n-1)}}\right)$$

$$=\left(\sqrt{\frac{5\times10.38}{11.07}},\sqrt{\frac{5\times10.38}{1.15}}\right)$$

$$=(2.17,\ 6.12)$$

⑩

$$\frac{\left(\frac{S_1^2}{n_1}+\frac{S_2^2}{n_2}\right)^2}{(1)\ V=\frac{\left(\frac{S_1^2}{n_1}\right)^2}{(n_1-1)}+\frac{\left(\frac{S_2^2}{n_2}\right)^2}{(n_2-1)}}$$

$n_1=9 \quad \bar{x}=7.67 \quad S_1=9.27$

$n_2=9 \quad \bar{y}=6.78 \quad S_2=21.15$

$$V=\frac{\left(\frac{9.27^2}{9}+\frac{21.15^2}{9}\right)^2}{\left(\frac{9.27^2}{9}\right)^2+\left(\frac{21.15^2}{9}\right)^2}=10.96\fallingdotseq11$$

$$(\bar{x}-\bar{y})\pm t_{\frac{\alpha}{2}}(v)\sqrt{\frac{S_1^2}{n_1}+\frac{S_2^2}{n_2}}$$

$$=7.67-6.78)\pm t_{0.05}(11)\sqrt{\frac{9.27^2}{9}+\frac{21.15^2}{9}}$$

$$=0.89\pm2.201\times7.70$$

$$=0.89\pm16.95$$