習題　　張單力　　A105270002.

9. 解：

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

$=\sqrt{\frac{1.284-6\times14.33^2}{5}}=\sqrt{10.38}=3.22$.

∴ σ 之點估計为 3.22.

(2). $1-\alpha=0.90$, $\frac{\alpha}{2}=0.05$, $n-1=5$.

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

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

∴ σ 之 90% 信賴區間为 $\left(\sqrt{\frac{5\times10.38}{\chi^2_{0.05}(5)}},\sqrt{\frac{5\times10.38}{\chi^2_{0.95}(5)}}\right)$

$=\left(\sqrt{\frac{51.9}{11.07}},\sqrt{\frac{51.9}{1.15}}\right)$

$=(2.17,6.72)$.