9.10

	減肥藥	平方和	自由度	均方
$T_1=3.15$ $\bar{Y}_1=0.63$		SSTR=4.609	3-1=2	MSTR=2.305
$T_2=9.19$ $\bar{Y}_2=1.53$	隨机誤差	SSE=1.286	17-3=14	MSE=0.092
$T_3=11.44$ $\bar{Y}_3=1.91$	總和	SST=5.895	n-1=16	
$T=23.78$ $\bar{Y}=1.40$			$F=\frac{2.305}{0.092}=25.05$	

$H_0: \mu_1=\mu_2=\mu_3$

$H_1: \mu_1\neq\mu_2\neq\mu_3$

$SST=\sum\sum y_{ij}^2-\frac{T^2}{n}=39.159-33.264=5.895$

$SSTR=\frac{T_i^2}{n_i}-\frac{T^2}{n}=37.873-33.264=4.609$

$5.895-4.609=1.286$

$\mu_2-\mu_1:(1.53-0.63)\pm 2.718\times 0.303\times\sqrt{\frac{1}{6}+\frac{1}{6}}=(0.401, 1.399)$

$\mu_3-\mu_2:(1.91-1.53)\pm 2.718\times 0.303\times\sqrt{\frac{1}{6}+\frac{1}{6}}=(-0.095, 0.855)$

$\mu_3-\mu_1:(1.91-0.63)\pm 2.718\times 0.303\times\sqrt{\frac{1}{6}+\frac{1}{6}}=(0.781, 1.779)$

9.12

$m=\binom{3}{2}=3$ $F_{0.05}(3-1, 17-3)=3.74$

$S=\sqrt{MSE}=\sqrt{0.092}=0.303$ $\sqrt{(k-1)F}=\sqrt{2\times 3.74}=2.73$

$\mu_2-\mu_1:(1.53-0.63)\pm 2.73\times 0.303\times\sqrt{\frac{1}{6}+\frac{1}{6}}=(0.399, 1.401)$

$\mu_3-\mu_2:(1.91-1.53)\pm 2.73\times 0.303\times\sqrt{\frac{1}{6}+\frac{1}{6}}=(-0.098, 0.858)$

$\mu_3-\mu_1:(1.91-0.63)\pm 2.73\times 0.303\times\sqrt{\frac{1}{6}+\frac{1}{6}}=(0.779, 1.781)$