9.7

$T_1 = 120+180 = 300$

$T_2 = 140+120+130 = 390$

$T_3 = 190+170+210 = 570$

$T_4 = 240+300 = 540$

$T = 300+390+570+540 = 1800$

$$\sum_{i=1}^{k}\sum_{j=1}^{n_i} y_{ij}^2 = 120^2+180^2+140^2+120^2+130^2+190^2+170^2+210^2+240^2+300^2$$

$$= 354400$$

$$SST = \sum_{i=1}^{k}\sum_{j=1}^{n_i} Y_{ij}^2 - \frac{T^2}{n} = 354400 - \frac{(1800)^2}{10} = 30400$$

$$SSTR = \frac{(300)^2}{2} + \frac{(390)^2}{3} + \frac{(570)^2}{3} + \frac{(540)^2}{2} - \frac{(1800)^2}{10} = 25800$$

$$\sum_{i=1}^{k}\left(\frac{T_i^2}{n_i}\right) - \frac{T^2}{n}$$

$SSE = SST - SSTR = 4600$

	平方和	自由度	均方	F值
組別	25800	4-1=3	$MSTR = \frac{25800}{3} = 8600$	$\frac{8600}{767} = 11.2$
誤差	4600	10-4=6	$MSE = \frac{4600}{6} = 767$	
總和	30400	10-1=9		

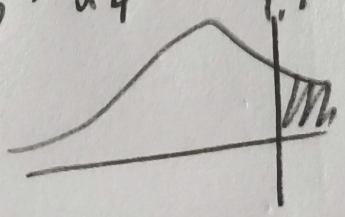
9.8

$\alpha = 0.05$

$H_0: \alpha_1 = \alpha_2 = \alpha_3 = \alpha_4$

$H_1: \alpha_i$ 不全等.

$F_1 > F_{0.05}(3,6) = 4.76$



拒絕 H_0