9.7

$T_{i.} = 300+390+570+540 = 1800$

$T = \sum_{i=1}^{4}\sum y_{ij}^2 = 120^2+180^2+140^2+\cdots+240^2+300^2 = 354400$

$SST = 354400 - \frac{(1800)^2}{10} = 30400$

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

$SSE = SST - SSTR = 30400 - 25800 = 4600$

| 变异来源 | 平方和 | 自由度 | 均方 |
|---|---|---|---|
| 处理 | SSTR=25800 | 4-1=3 | $MSTR = \frac{25800}{3}$ |
| 随机 | SSE=4600 | 10-4=6 | $MSE = \frac{4600}{6}$ |
| 总和 | SST=30400 | 10-1=9 | |

9.8

均方

$MSTR = \frac{25800}{3} = 8600$

$MSE = \frac{4600}{6} = 767$

F值

$\frac{8600}{767} = 11.2$

$\therefore F = 11.2 > F_{0.05}(3,6) = 4.76$ 拒绝$H_0$