

Week 13

$$9-7 \quad T_1 = 120 + 180 = 300$$

$$T_2 = 140 + 120 = 260 = 390$$

$$T_3 = 190 + 170 + 210 = 570$$

$$T_4 = 240 + 300 = 540$$

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

$$\sum_{i=1}^4 \sum_{j=1}^{n_i} y_{ij}^2 = 120^2 + 180^2 + 140^2 + 120^2 + 130^2 + 190^2 + 170^2 + 210^2 + 240^2 + 300^2 = 35440$$

$$SST = \sum_{i=1}^K \sum_{j=1}^{n_i} y_{ij}^2 - \frac{T^2}{n} = 35440 - \frac{(1800)^2}{10} = 30400$$

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

$$SSE = SST - SSR = 4600$$

25800	4-1=3	8600
4600	10-4=6	767
30400	10-1=9	

$$F_{1,6} = \frac{8600}{767} = 11.2$$

$$9-8 \quad \alpha = 0.05$$

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

$$H_1 = \alpha_i \neq \alpha_j$$

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

→ 拒絕 H_0