習題 7

$T_1 = 120 + 180 = 300$

$T_2 = 140 + 120 + 130 = 390$

$T_3 = 190 + 170 + 210 = 570$

$T_4 = 240 + 300 = 540$

$T = 300 + 390 + 570 + 540$

$= \sum_{i=1}^{k} \sum_{j=1}^{n_i} y_{ij} = 1800$

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

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

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

$SSE = SST - SSTR$

$= 30400 - 25800$

$= 4600$