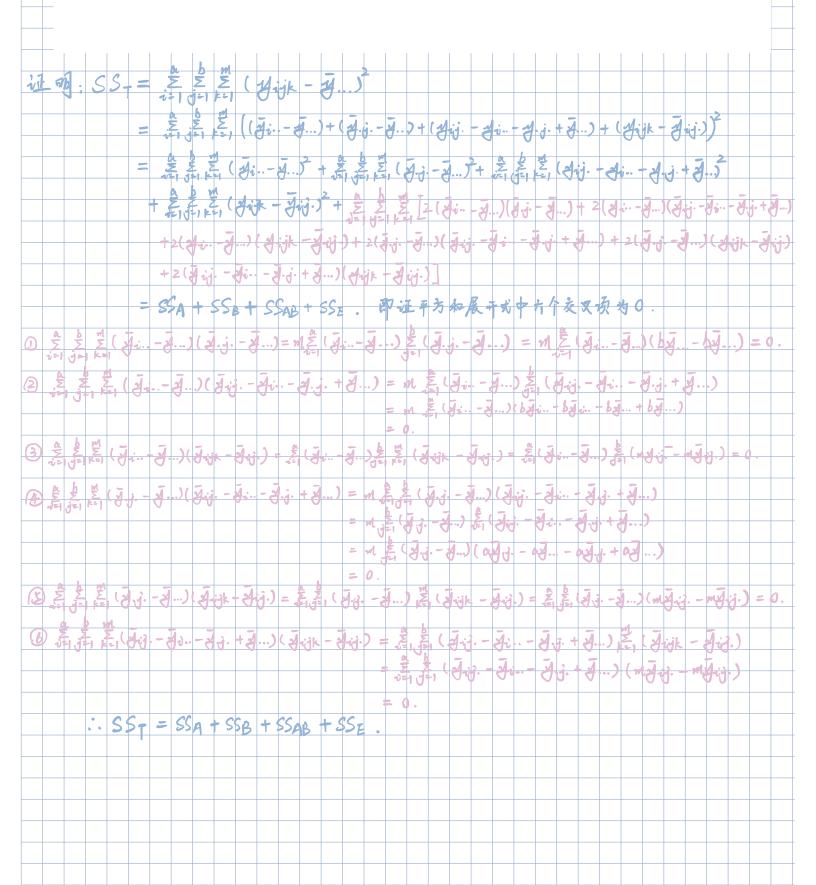
理论题 1

• 证明: 双因子方差分析模型中的偏差平方和分解公式,即

$$SS_T = SS_A + SS_B + SS_{AB} + SS_E.$$



理论题 2

• 证明: 均方的期望如下:

$$E(MS_A) = \sigma^2 + \frac{bm \sum_{i=1}^{a} \alpha_i^2}{a - 1}$$

$$E(MS_B) = \sigma^2 + \frac{am \sum_{j=1}^{b} \beta_j^2}{b - 1}$$

$$E(MS_{AB}) = \sigma^2 + \frac{m \sum_{i=1}^{a} \sum_{j=1}^{b} (\alpha \beta)_{ij}^2}{(a - 1)(b - 1)}$$

$$E(MS_E) = \sigma^2$$

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