

6/1 課堂作業

例 9.10

$$T_1 = 3.15 \quad T_2 = 9.19 \quad T_3 = 11.44 \quad T = 23.78$$

$$\bar{F}_1 = 0.63 \quad \bar{F}_2 = 1.53 \quad \bar{F}_3 = 1.91 \quad F = 1.4$$

$$n = 17$$

$$H_0: \mu_1 = \mu_2 = \mu_3$$

 $H_1: \mu_1, \mu_2, \mu_3$ 有明顯差異

$$SST = 39.157 - 33.264 = 5.893$$

$$SSTR = 37.873 - 33.264 = 4.609$$

$$SSE = SST - SSTR = 1.286$$

變異來源	平方和	自由度	均方	F 檢定值
減肥藥	$SSTR = 4.609$	2	$MSTR = 2.305$	$\frac{2.305}{0.092} = 25.05$
隨機誤差	$SSE = 1.286$	14	$MSE = 0.092$	
總和	$SST = 5.893$	16		

$$F = 25.05 > F_{0.05}(2, 14) = 3.74 \quad \text{棄卻 } H_0$$

例 9.12

$$m = \left(\frac{3}{2}\right) = 3 \quad F_{0.05}(3-1, 17.3) = 3.74$$

$$s = \sqrt{MSE} = \sqrt{0.092} = 0.303, \quad \sqrt{(k-1)F} = \sqrt{(3-1)3.74} = 2.73$$

$$\mu_2 - \mu_1: (1.53 - 0.63) \pm 2.73 \times 0.303 \times \sqrt{\frac{1}{6} + \frac{1}{5}} = (0.399, 1.401), \text{ 不包 } 0$$

$$\mu_3 - \mu_2: (1.91 - 1.53) \pm 2.73 \times 0.303 \times \sqrt{\frac{1}{6} + \frac{1}{6}} = (-0.098, 0.858), \text{ 包 } 0$$

$$\mu_3 - \mu_1: (1.91 - 0.63) \pm 2.73 \times 0.303 \times \sqrt{\frac{1}{6} + \frac{1}{5}} = (0.779, 1.781), \text{ 不包 } 0$$

結果與 9.11 相同

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