

例 9.10

$$T_1 = 3.15 \quad T_2 = 9.17 \quad T_3 = 11.44 \quad T = 23.78$$

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

$$h = 17$$

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

 $H_1: \mu_1, \mu_2, \mu_3$ 有明顯差異

$$SST = 39.159 - 33.264 = 5.895$$

$$SSR = 37.873 - 33.264 = 4.609$$

$$SSE = SST - SSR = 1.286$$

變異來源	平方和	自由度	均方	F 檢定值
減肥藥	$SSR = 4.609$	2	$MSTR = 2.305$	$\frac{2.305}{0.092} = 25.05$
隨機誤差	$SSE = 1.286$	14	$MSE = 0.092$	
總和	$SST = 5.895$	16		

$$F = 25.05 > F_{0.05}(2, 14) = 3.74$$

~~棄~~ H_0

例 9.12

$$m = \left(\frac{3}{2}\right) = 3, \quad F_{0.05}(3-1, 11-3) = 3.74$$

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

$$M_2 - M_1 = (1.53 - 0.63) \pm 2.73 \times 0.303 \times \sqrt{\frac{1}{6} + \frac{1}{5}} = (0.399, 1.401), \text{ 不包含 } 0$$

$$M_3 - M_2 = (1.91 - 1.53) \pm 2.73 \times 0.303 \times \sqrt{\frac{1}{3} + \frac{1}{6}} = (-0.098, 0.858), \text{ 包含 } 0$$

$$M_3 - M_1 = (1.91 - 0.63) \pm 2.73 \times 0.303 \times \sqrt{\frac{1}{6} + \frac{1}{5}} = (0.779, 1.781), \text{ 不包含 } 0$$

結果與 9.11 相同