

9.10

$$T_1 = 2.15 \quad \bar{y}_1 = 0.63$$

$$T_2 = 9.09 \quad \bar{y}_2 = 1.53$$

$$T_3 = 11.44 \quad \bar{y}_3 = 1.91$$

$$T = 22.76 \quad \bar{y} = 1.9$$

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

$$H_1: \mu_1 \neq \mu_2 \neq \mu_3$$

$$SST = \sum_{i=1}^n y_i^2 - \frac{T^2}{n} = 39.159 - 33.269$$

$$= 5.89$$

$$SSR = \sum_{i=1}^k \frac{T_i^2}{n_i} - \frac{T^2}{n} = 39.273 - 33.269$$

$$= 6.004$$

$$C.F.E = 6.004 - 5.89 = 0.114$$

$$9.11$$

$$MSE = 0.114 / 17 = 0.0067$$

$$F_{0.05}(3, 17-3) = 2.74$$

$$S = \sqrt{MSE} = \sqrt{0.0067} = 0.082$$

$$\mu_2 - \mu_1: (1.53 - 0.63) \pm 2.75 \times 0.082 \times \sqrt{\frac{1}{4} + \frac{1}{4}} = (0.347, 1.401)$$

$$\mu_3 - \mu_2: (1.91 - 1.53) \pm 2.75 \times 0.082 \times \sqrt{\frac{1}{4} + \frac{1}{4}} = (-0.098, 0.958)$$

$$\mu_3 - \mu_1: (1.91 - 0.63) \pm 2.75 \times 0.082 \times \sqrt{\frac{1}{4} + \frac{1}{4}} = (0.779, 1.781)$$

9.11.10

$$SST = 4.69$$

$$SSE = 1.286$$

$$SST = 5.975$$

$$F = \frac{2.395}{0.01} = 239.5$$

$$\mu_2 - \mu_1: (1.53 - 0.63) \pm 2.75 \times 0.082 \times \sqrt{\frac{1}{4} + \frac{1}{4}} = (0.347, 1.401)$$

$$\mu_3 - \mu_2: (1.91 - 1.53) \pm 2.75 \times 0.082 \times \sqrt{\frac{1}{4} + \frac{1}{4}} = (-0.098, 0.958)$$

$$\mu_3 - \mu_1: (1.91 - 0.63) \pm 2.75 \times 0.082 \times \sqrt{\frac{1}{4} + \frac{1}{4}} = (0.779, 1.781)$$