

DATE ☐ ☐ ☐14

(1)

$$n=15$$

$$\sum x_i^2 = 1+4+9+4+1+9+9+4+4+1+1+1+4+1+1$$

$$= 54$$

$$\bar{x} = \frac{\sum x_i}{n} = 1.73$$

$$S = \sqrt{\frac{\sum x_i^2 - n\bar{x}^2}{n-1}} = \sqrt{\frac{54 - 15 \times 1.73^2}{14}} = \sqrt{\frac{0.651}{14}} = 0.18$$

$$1 - \alpha = 0.95$$

$$t_{\frac{\alpha}{2}, (n-1)} = t_{0.025, (14)} = 2.145$$

$$1.73 \pm t_{0.025, (14)} \frac{0.18}{\sqrt{15}} = 1.73 \pm 2.145 \frac{0.18}{\sqrt{15}}$$

$$= (1.29, 2.19) \#$$

(2)

$$1 - \alpha = 0.18$$

$$\frac{\alpha}{2} = 0.1$$

$$\alpha = 0.2$$

$$1.73 \pm t_{0.1, (14)} \frac{0.18}{\sqrt{15}} = 1.73 \pm 1.345 \frac{0.18}{\sqrt{15}}$$

$$(1.45, 2.01) \#$$