

### 例 6.19

$$1 - \alpha = 0.95, z_{\frac{\alpha}{2}} = z_{0.025} = 1.96$$
$$n = \left( \frac{z_{\frac{\alpha}{2}}}{e} \right)^2 = \left( \frac{1.96 \times 0.05}{0.01} \right)^2 = 96.04$$

$$n = 97, 97 - 35 = 62$$

### 例 6.7

$$(1) 1 - \alpha = 0.95, \frac{\alpha}{2} = 0.025, z_{\frac{\alpha}{2}} = z_{0.025} = 1.96$$

$$\bar{x} \pm z_{\frac{\alpha}{2}} \frac{s}{\sqrt{n}} = 16.33 \pm 1.96 \frac{4.29}{6} = 16.33 \pm 1.4$$

$$\rightarrow (14.93, 17.73)$$

$$(2) 1 - \alpha = 0.9, \frac{\alpha}{2} = 0.05, z_{\frac{\alpha}{2}} = z_{0.05} = 1.645$$

$$\bar{x} \pm z_{\frac{\alpha}{2}} \frac{s}{\sqrt{n}} = 16.33 \pm 1.645 \frac{4.29}{\sqrt{36}} = 16.33 \pm 1.18$$

$$\rightarrow (15.15, 17.51)$$

### 例 6.9

$$(1) \text{M点估计为 } \bar{x} = 15291.67$$

$$(2) 1 - \alpha = 0.9, \frac{\alpha}{2} = 0.05$$

$$\text{自由度: } n - 1 = 12 - 1 = 11, t_{0.05(11)} = 1.796$$

$$\bar{x} \pm t_{\frac{\alpha}{2}} (n-1) \frac{s}{\sqrt{n}} = 15291.67 \pm 1.796 \frac{197.52}{\sqrt{12}} =$$

$$15291.67 \pm 102.41 = (15189.26, 15394.08)$$

$$(3) 15394.08 - 15189.26 = 204.82$$