

Hoofdstuk 10

Bijlage 10.1

$$Z = \frac{\bar{X} - \mu}{\sigma / \sqrt{n}}$$

Bijlage 10.2

Confidence Interval Estimator of μ^*

$$\bar{x} - z_{\alpha/2} \frac{\sigma}{\sqrt{n}}, \quad \bar{x} + z_{\alpha/2} \frac{\sigma}{\sqrt{n}}$$

The probability $1 - \alpha$ is called the **confidence level**.

$\bar{x} - z_{\alpha/2} \frac{\sigma}{\sqrt{n}}$ is called the **lower confidence limit (LCL)**.

$\bar{x} + z_{\alpha/2} \frac{\sigma}{\sqrt{n}}$ is called the **upper confidence limit (UCL)**.

We often represent the confidence interval estimator as

$$\bar{x} \pm z_{\alpha/2} \frac{\sigma}{\sqrt{n}}$$

where the minus sign defines the lower confidence limit and the plus sign defines the upper confidence limit.

Bijlage 10.3

Sample Size to Estimate a Mean

$$n = \left(\frac{z_{\alpha/2} \sigma}{B} \right)^2$$