

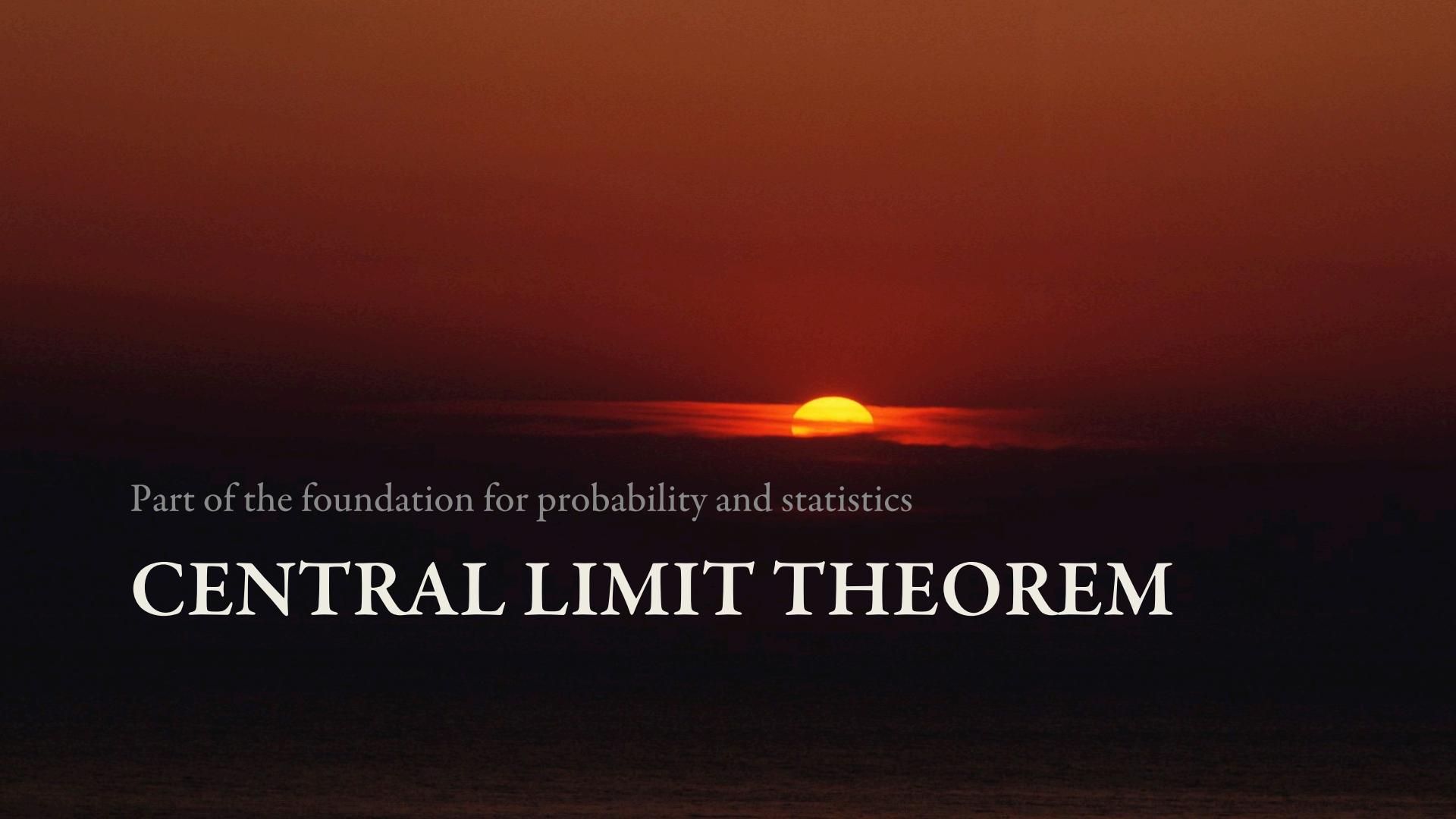


ASQ CRE Prep course

Lesson II. A. 1. c.

Basic Probability Concepts

Central Limit Theorem



Part of the foundation for probability and statistics

CENTRAL LIMIT THEOREM

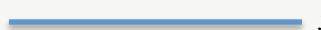
Central Limit Theorem

- **The sample means will be more normally distributed than individual readings**
- **Standard error of the mean**

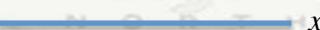
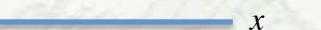
$$\sigma_{\bar{x}} = \frac{\sigma_x}{\sqrt{n}}$$

$$s_{\bar{x}} = \frac{s_x}{\sqrt{n}}$$

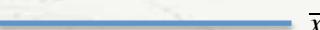
Pop.
Dist.



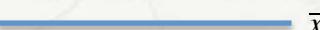
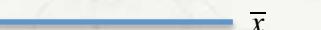
$n=2$



$n=5$



$n=25$



Where is CLT
used in practice?



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Lesson II. A. 1. d.

Statistical Terms

Measures of Dispersion