

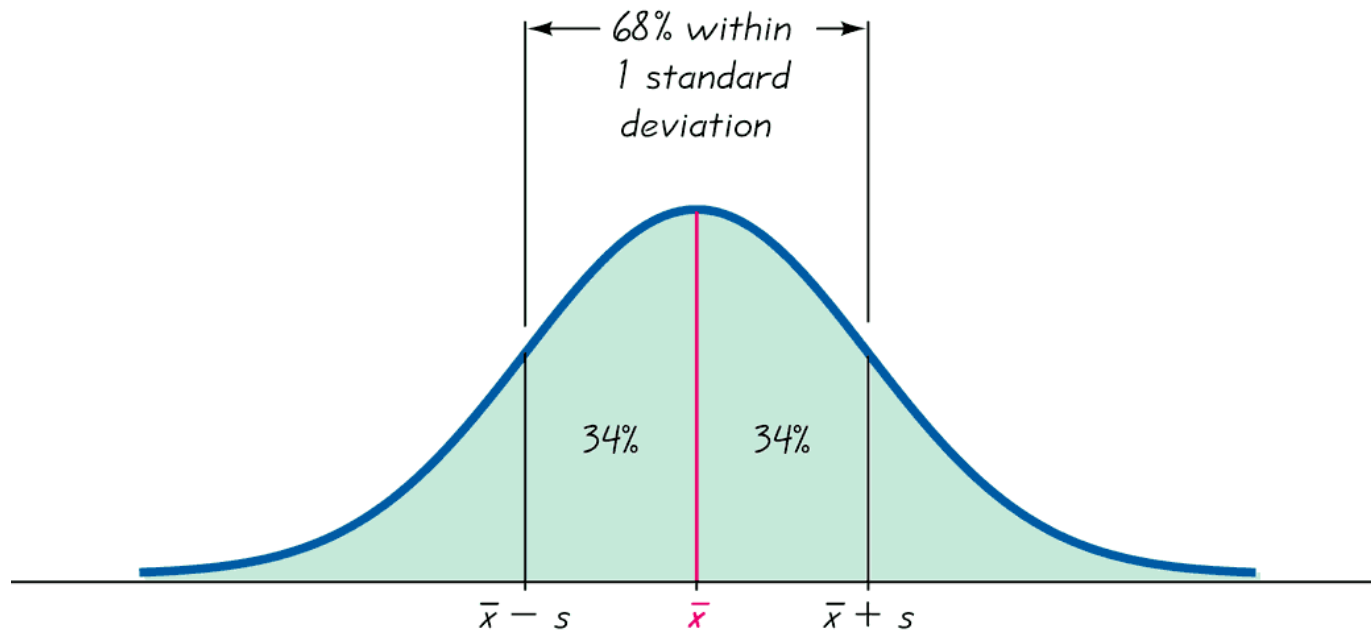
Gaussian distribution and empirical rule

Empirical (or 68-95-99.7) Rule

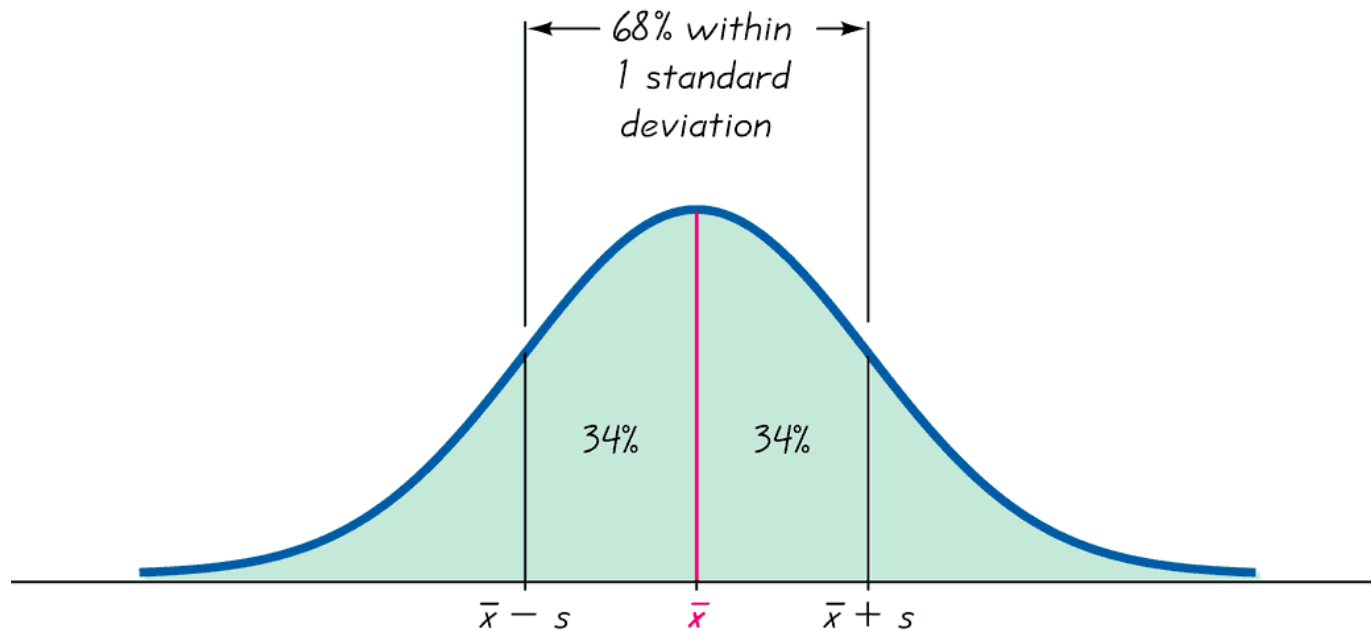
For data sets having a distribution that is approximately bell shaped, the following properties apply:

- ❖ **About 68% of all values fall within 1 standard deviation of the mean.**
- ❖ **About 95% of all values fall within 2 standard deviations of the mean.**
- ❖ **About 99.7% of all values fall within 3 standard deviations of the mean.**

The Empirical Rule

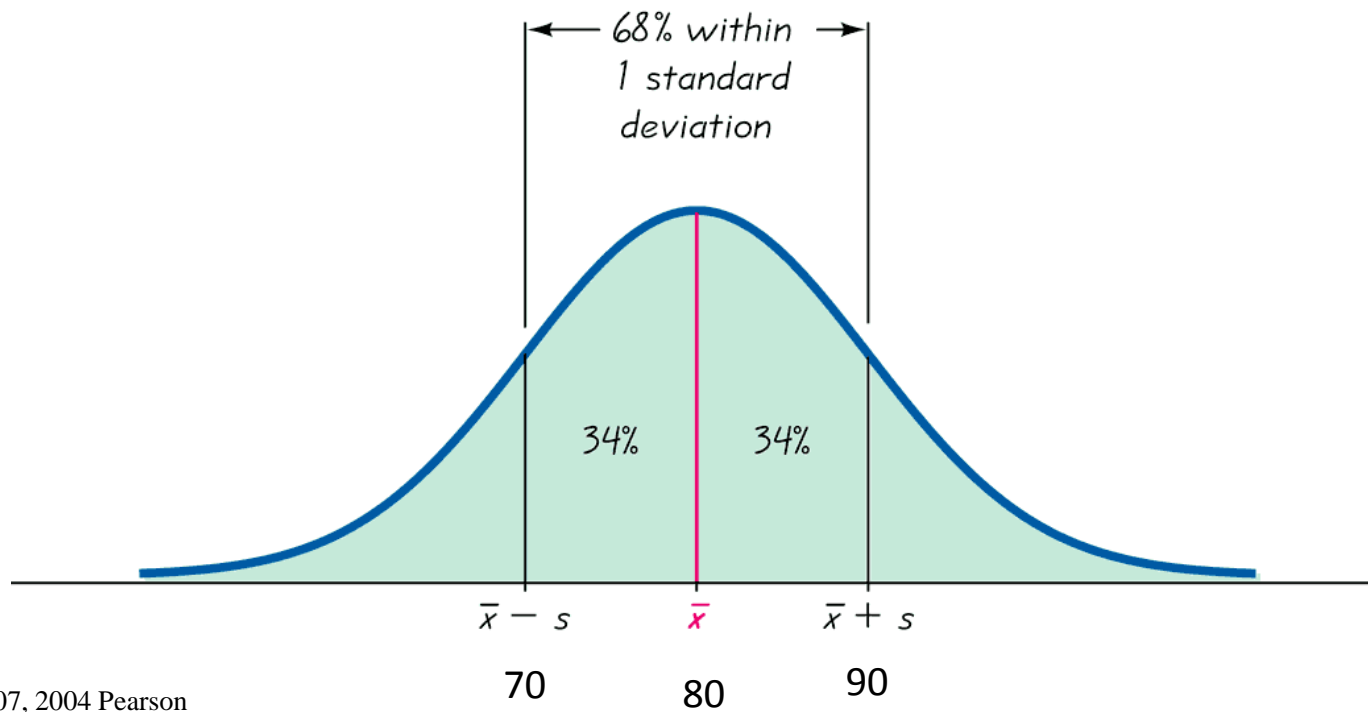


The Empirical Rule

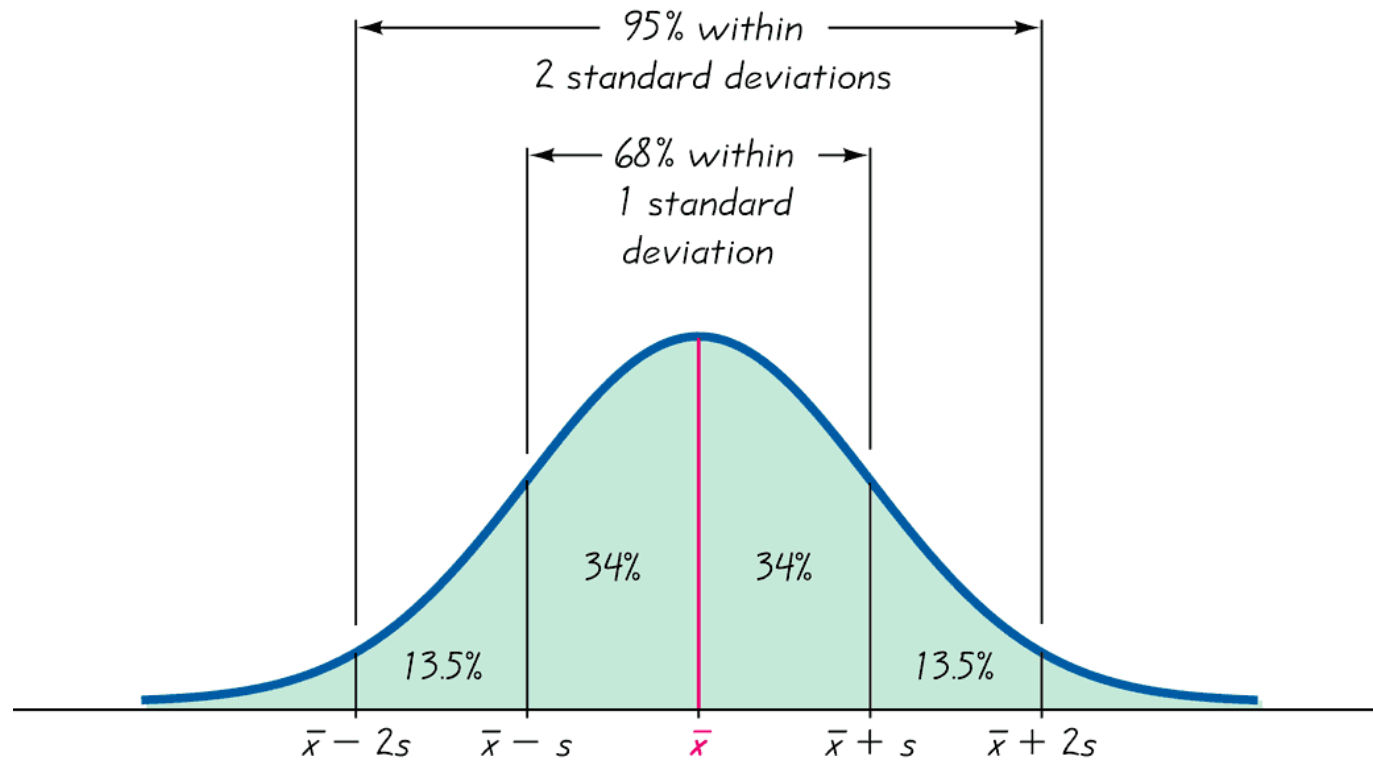


The Empirical Rule

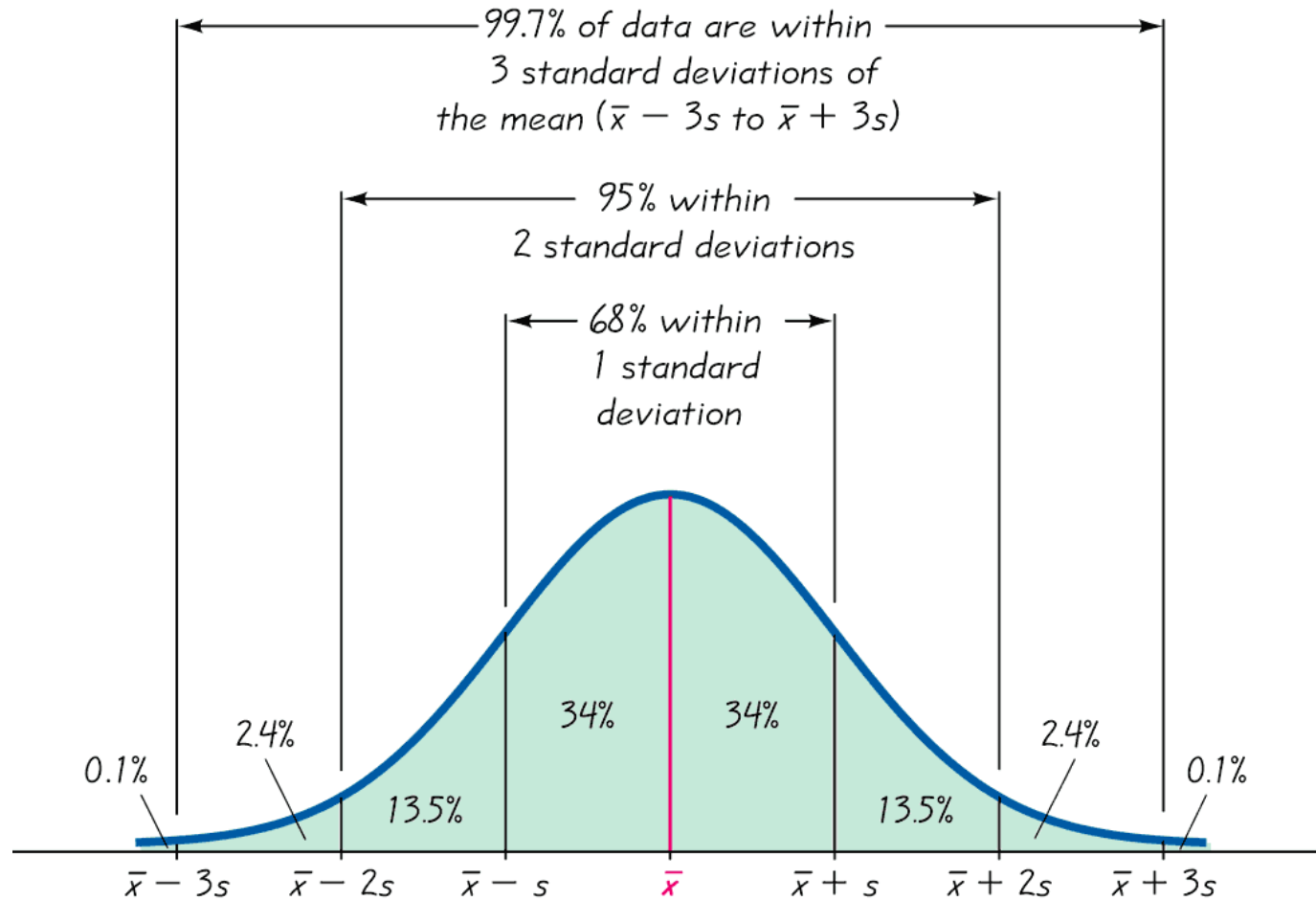
\bar{x} =80 mmHg
s=10 mmHg



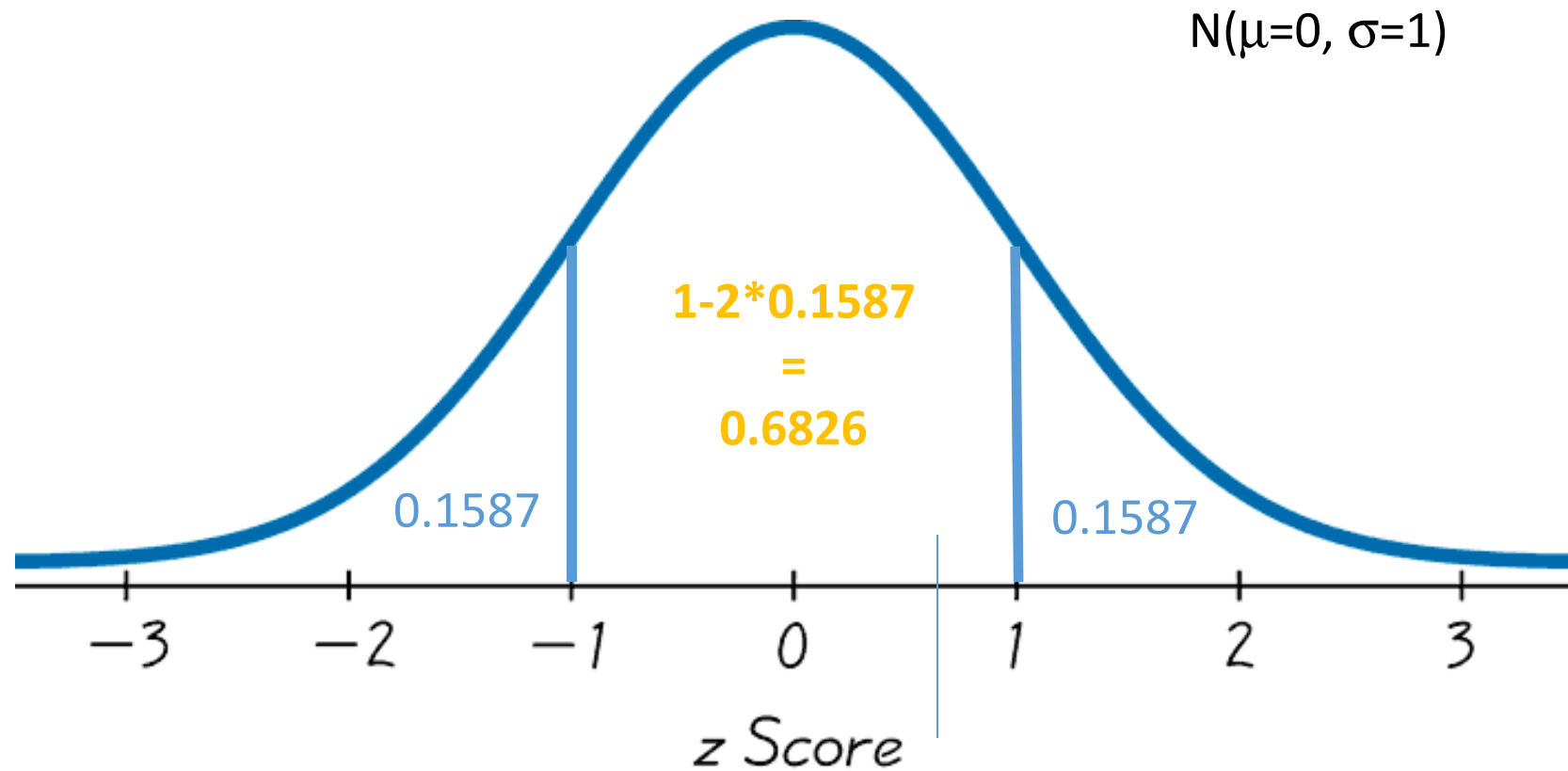
The Empirical Rule



The Empirical Rule



The standard Normal distribution: z score



If a distribution of data is approximately symmetric and bell-shaped, about 95% of the data should fall within two standard deviations of the mean.

