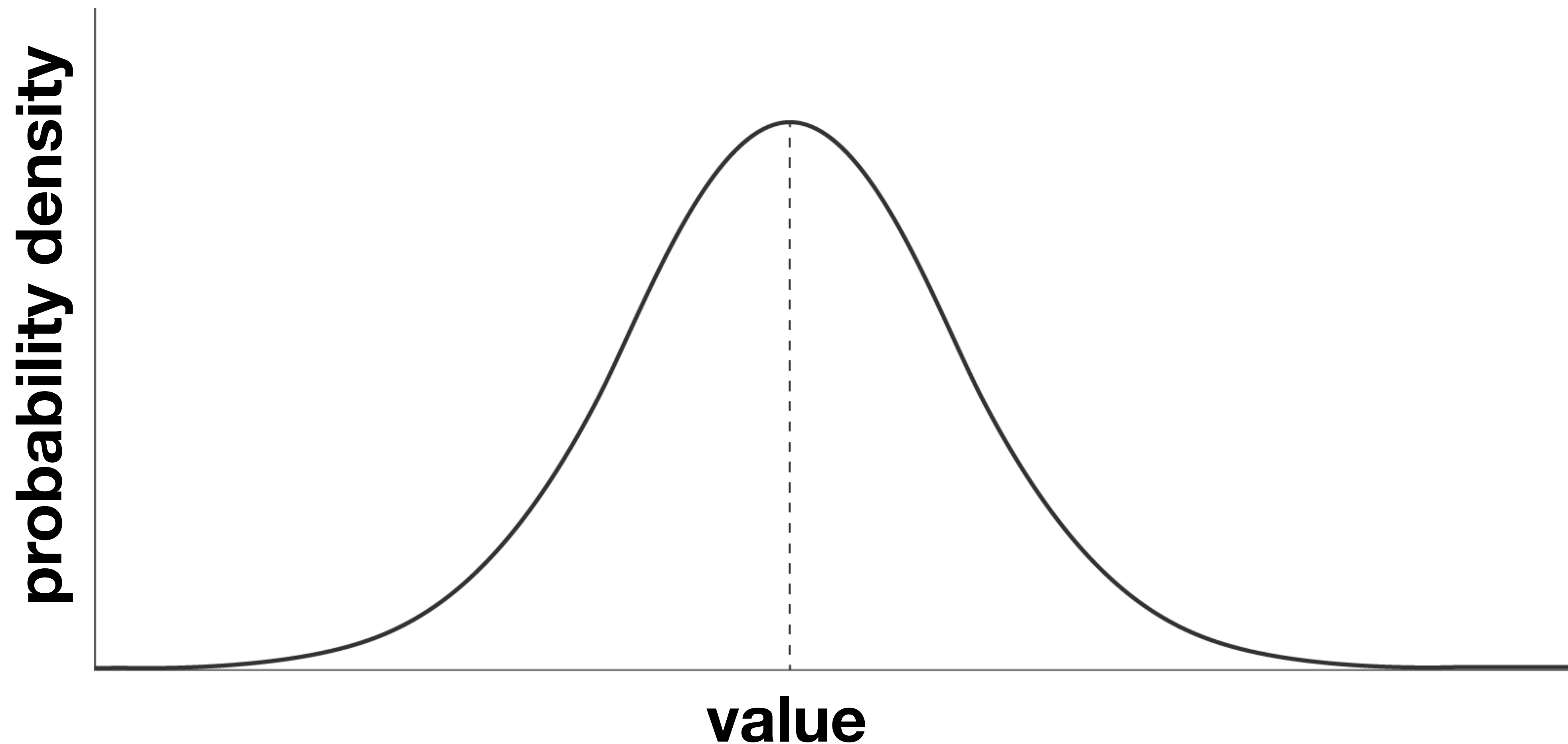


Normal distribution and statistics

Tech Frontiers

Rachel Cox and Zack Kilpatrick

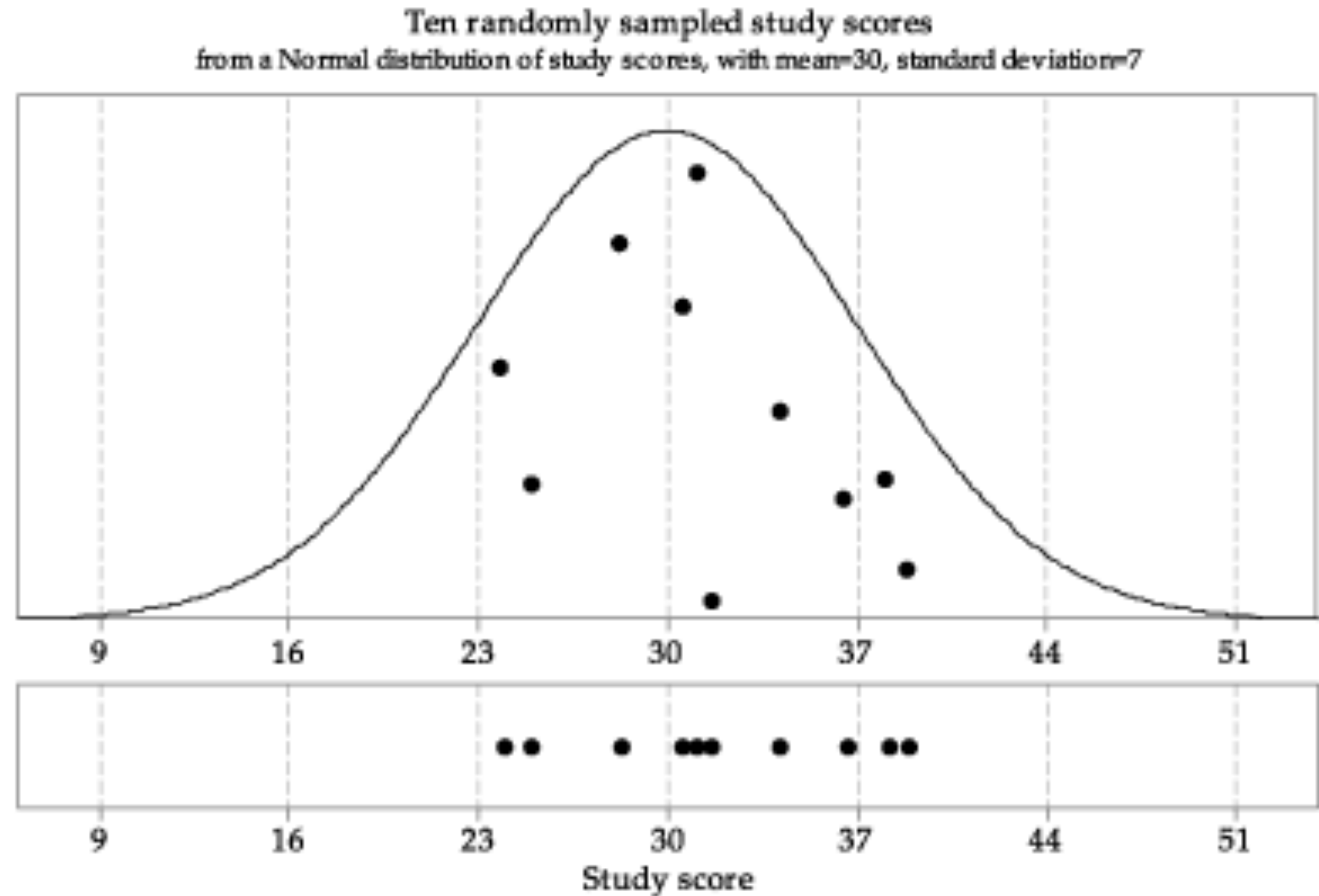
July 12 & 13, 2021



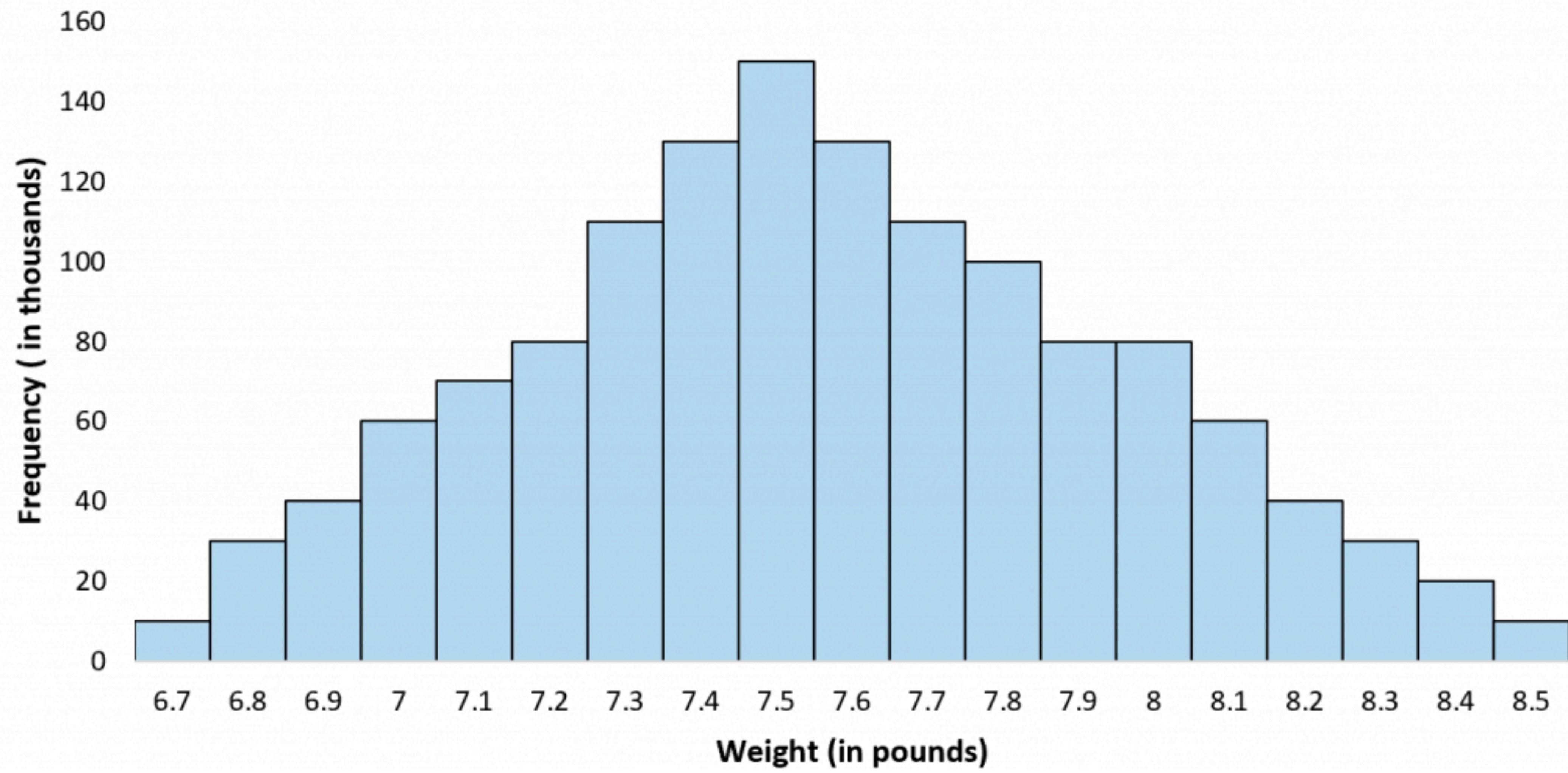
- random samples of data that are ***normally distributed*** each have probability given by the ***density function***

$$f(x) = \frac{1}{\sqrt{2\pi\sigma^2}} \exp \left[-\frac{(x - \mu)^2}{2\sigma^2} \right]$$

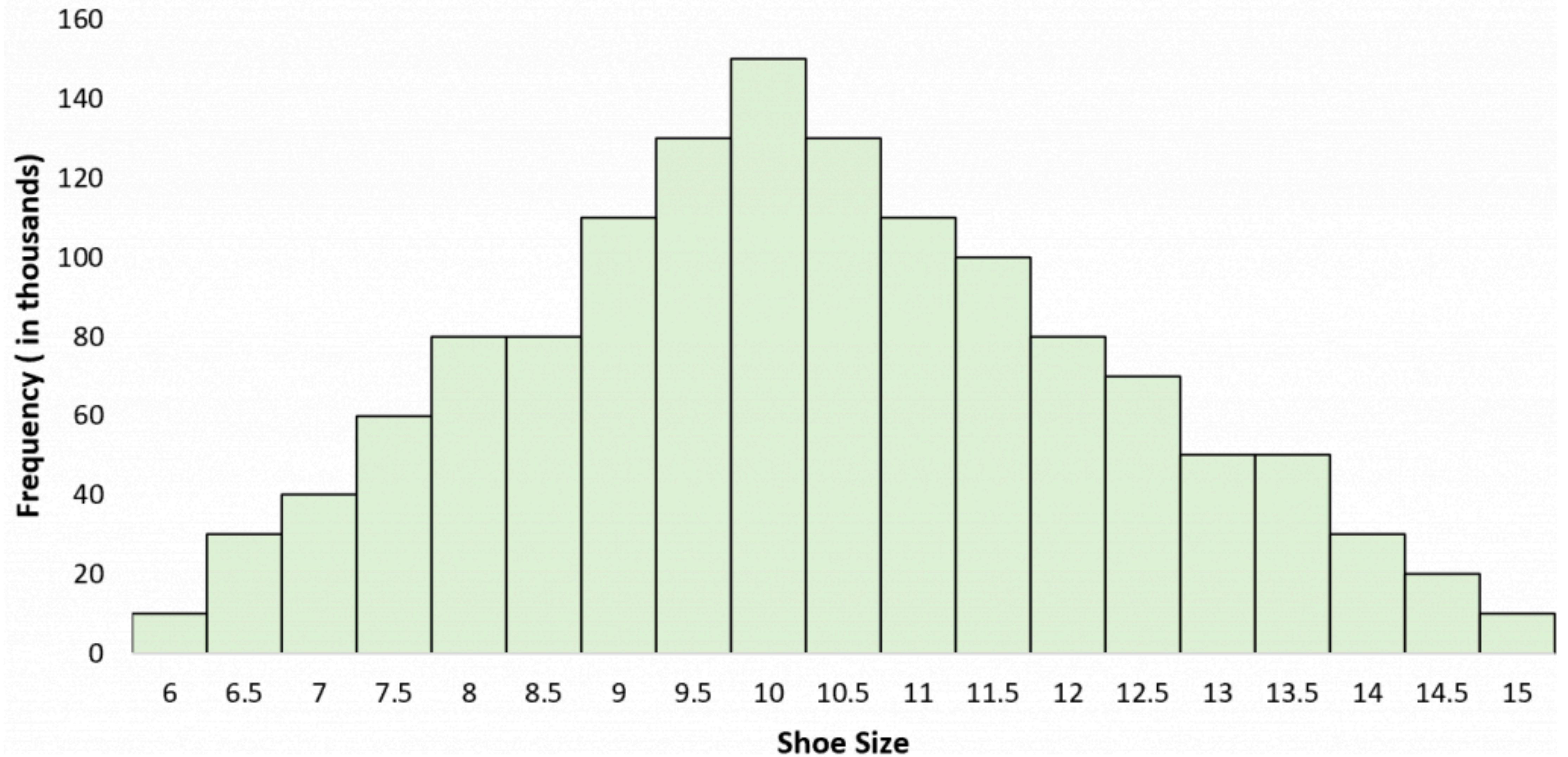
- with mean μ and standard deviation σ



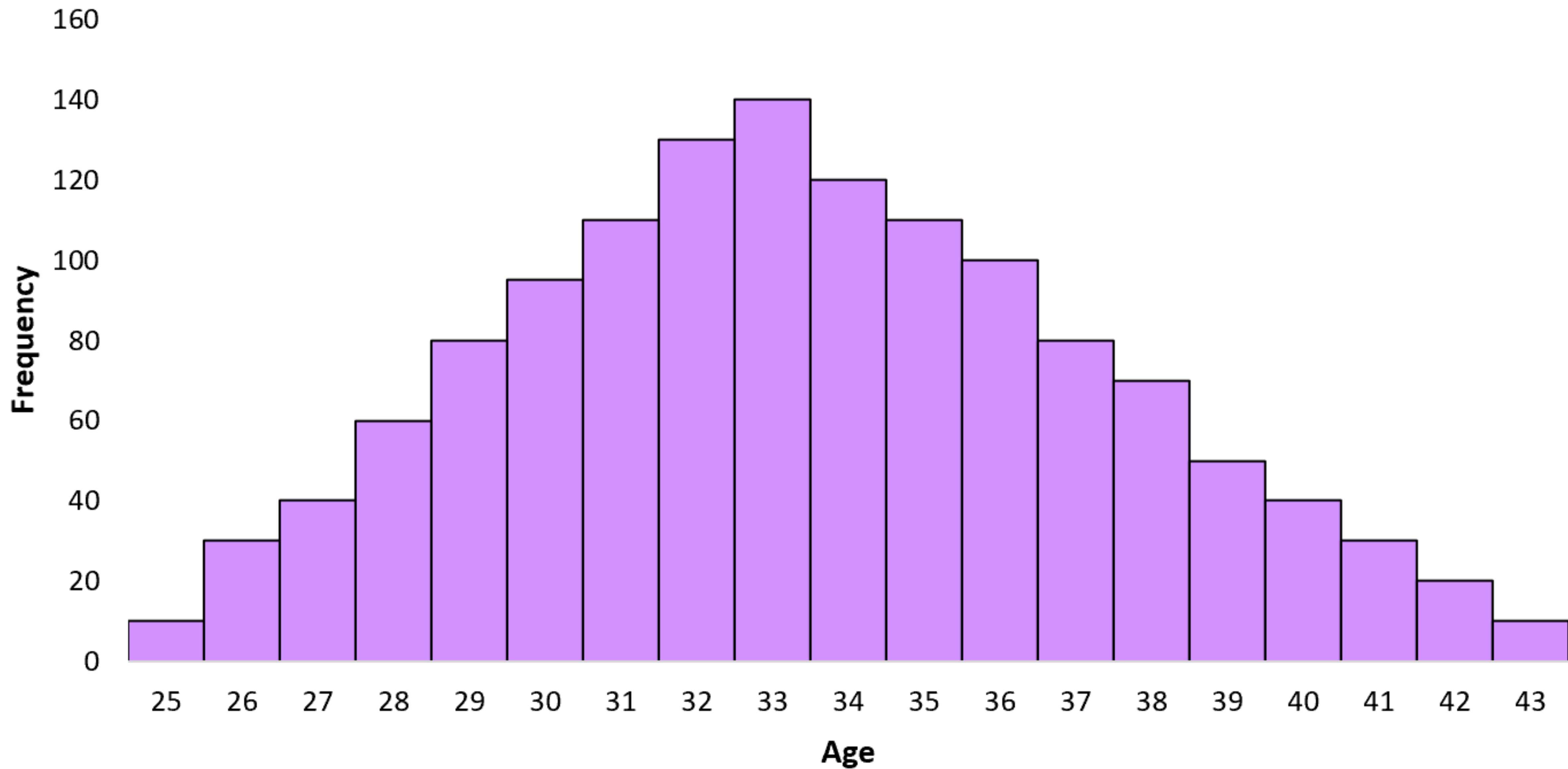
Distribution of Newborn Weights



Distribution of Shoe Sizes

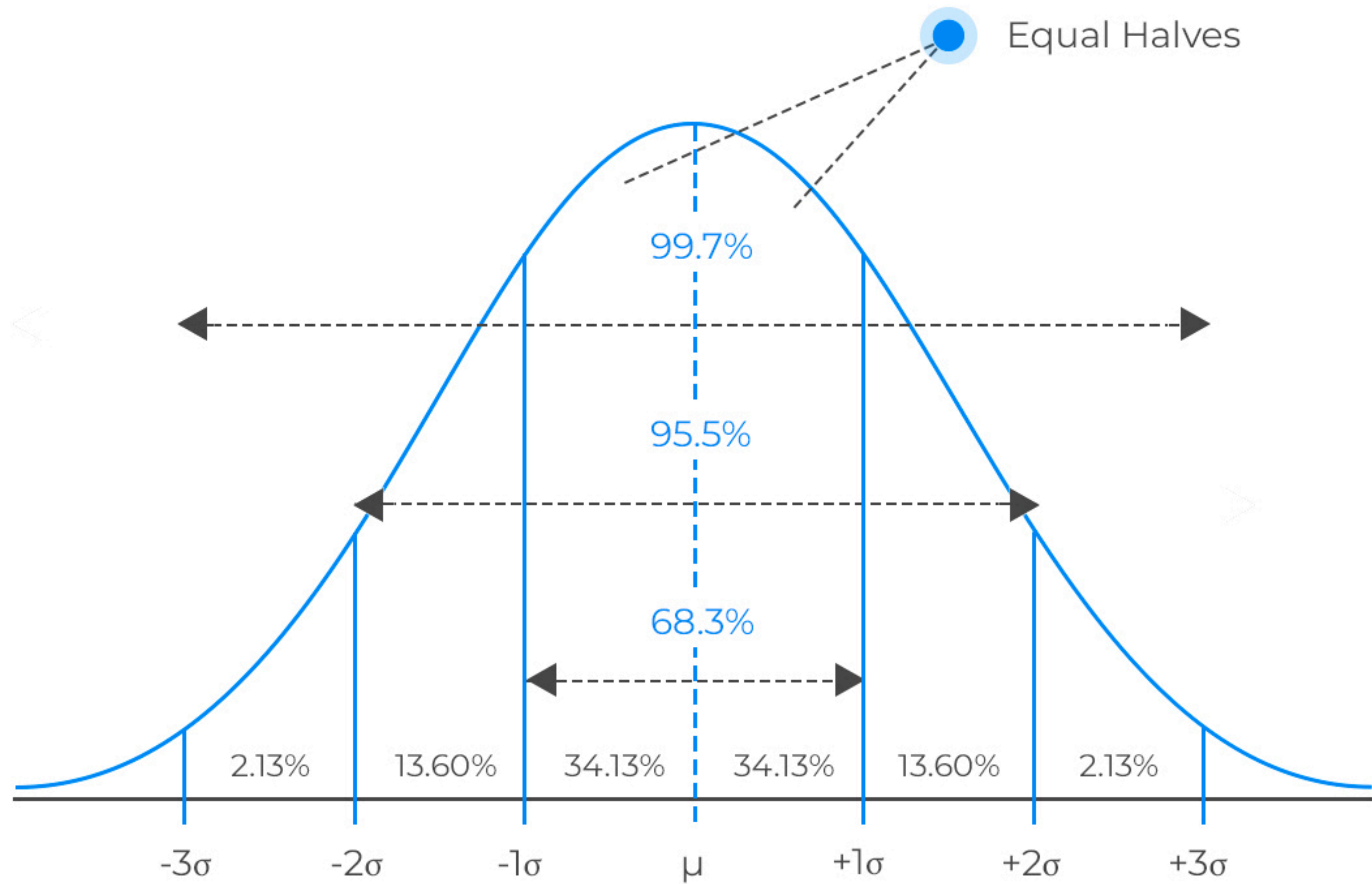


Distribution of NFL Player Retirement Age



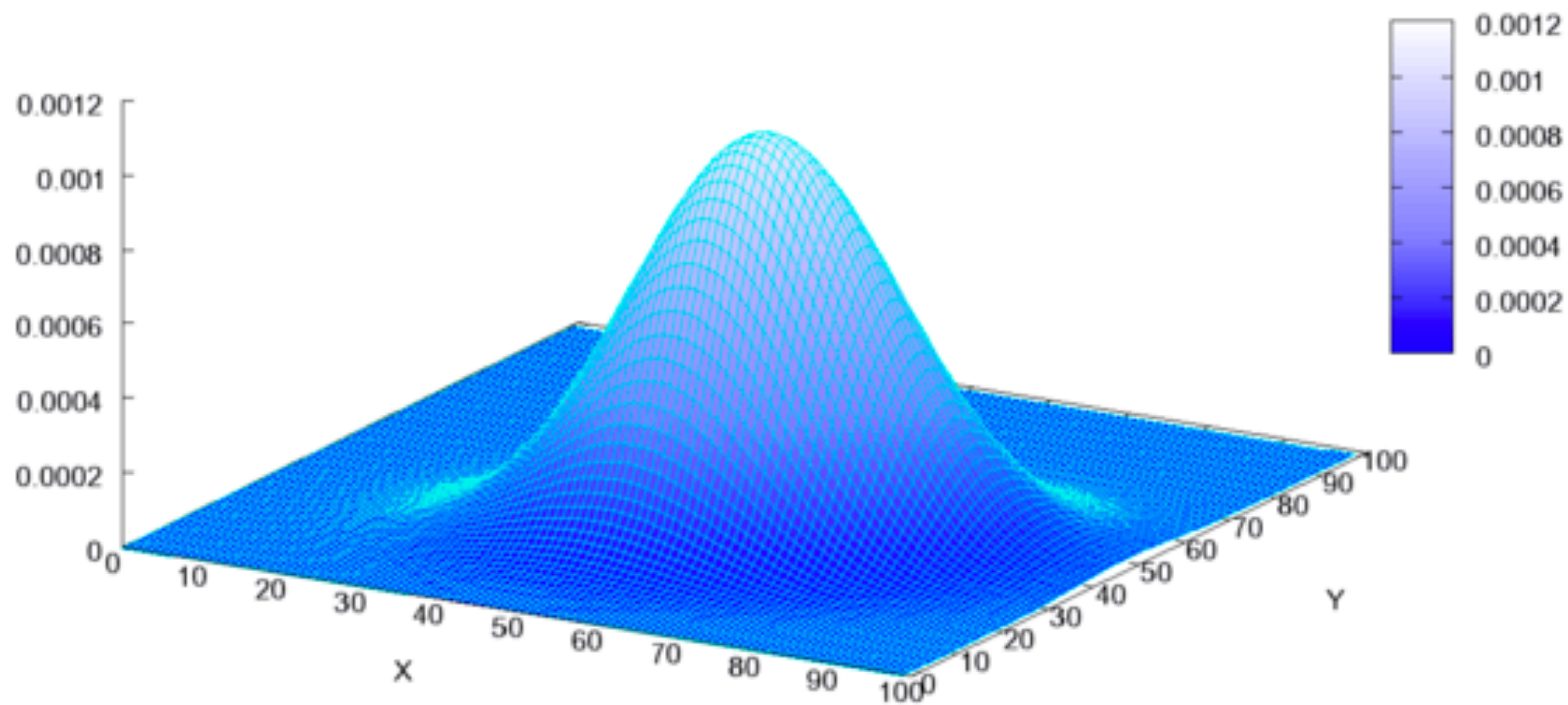


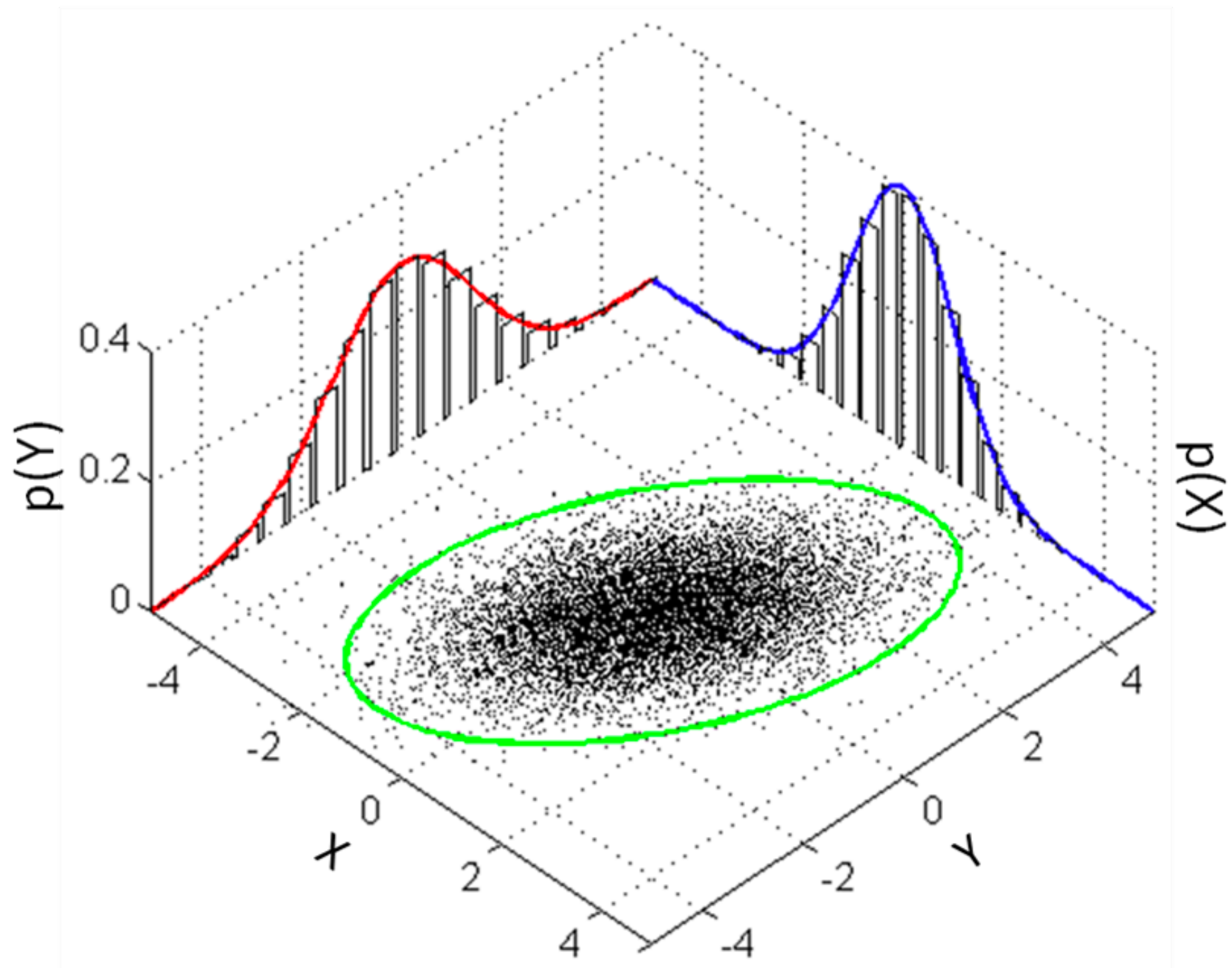
Shape of the normal distribution



No. of standard deviations from the mean

Multivariate Normal Distribution





<https://forms.gle/3wdKSUx8jbyZofh76>