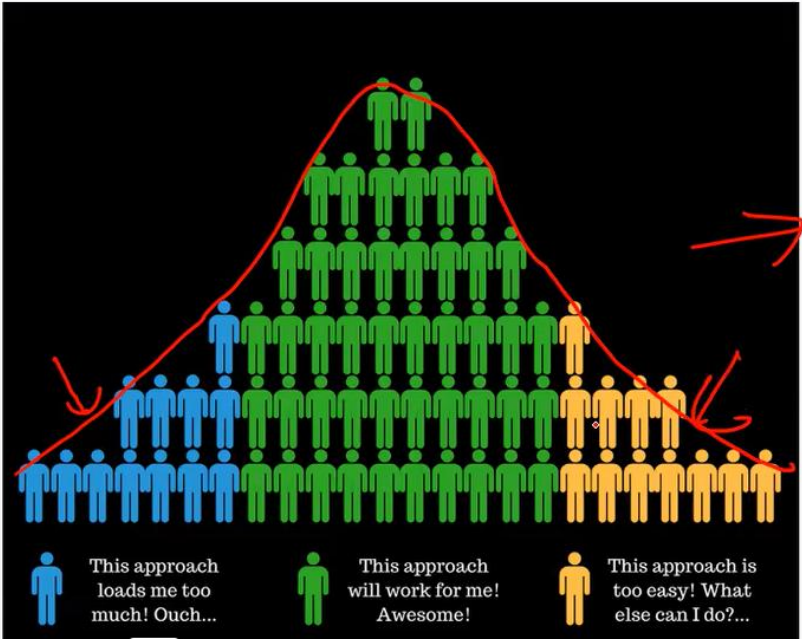
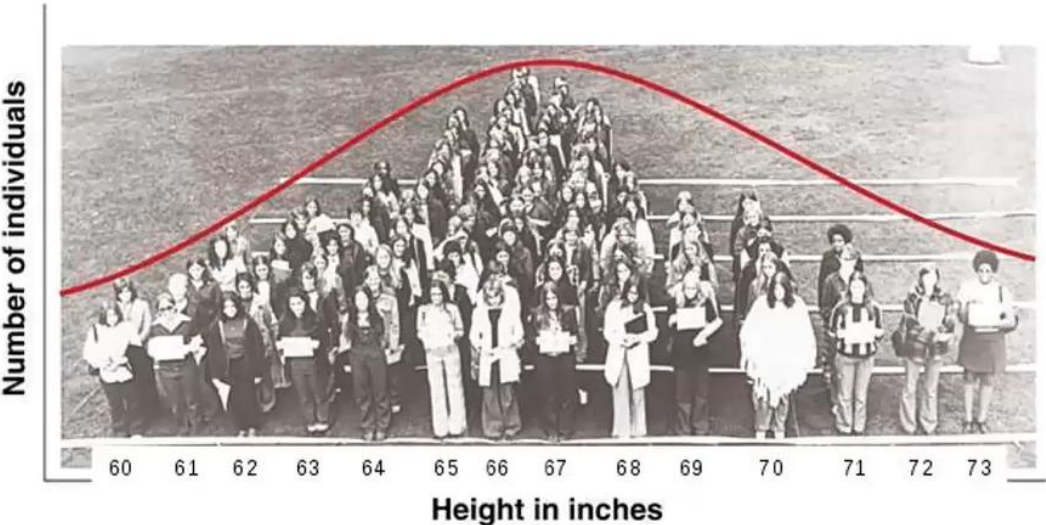
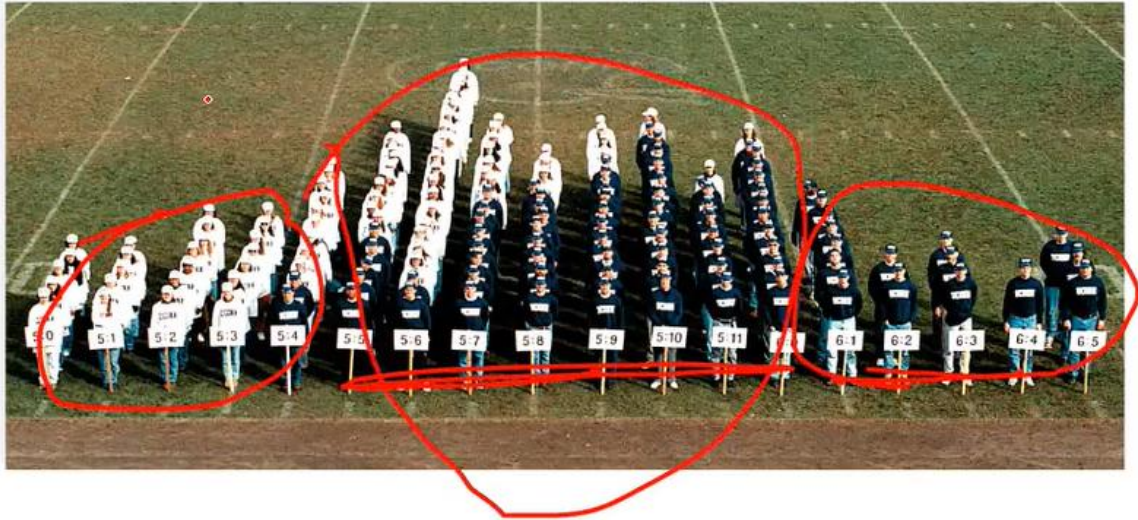
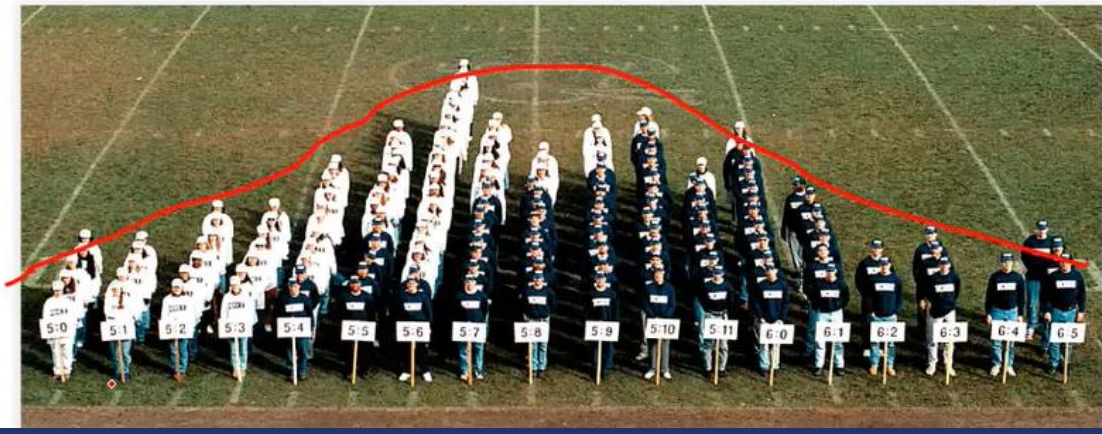
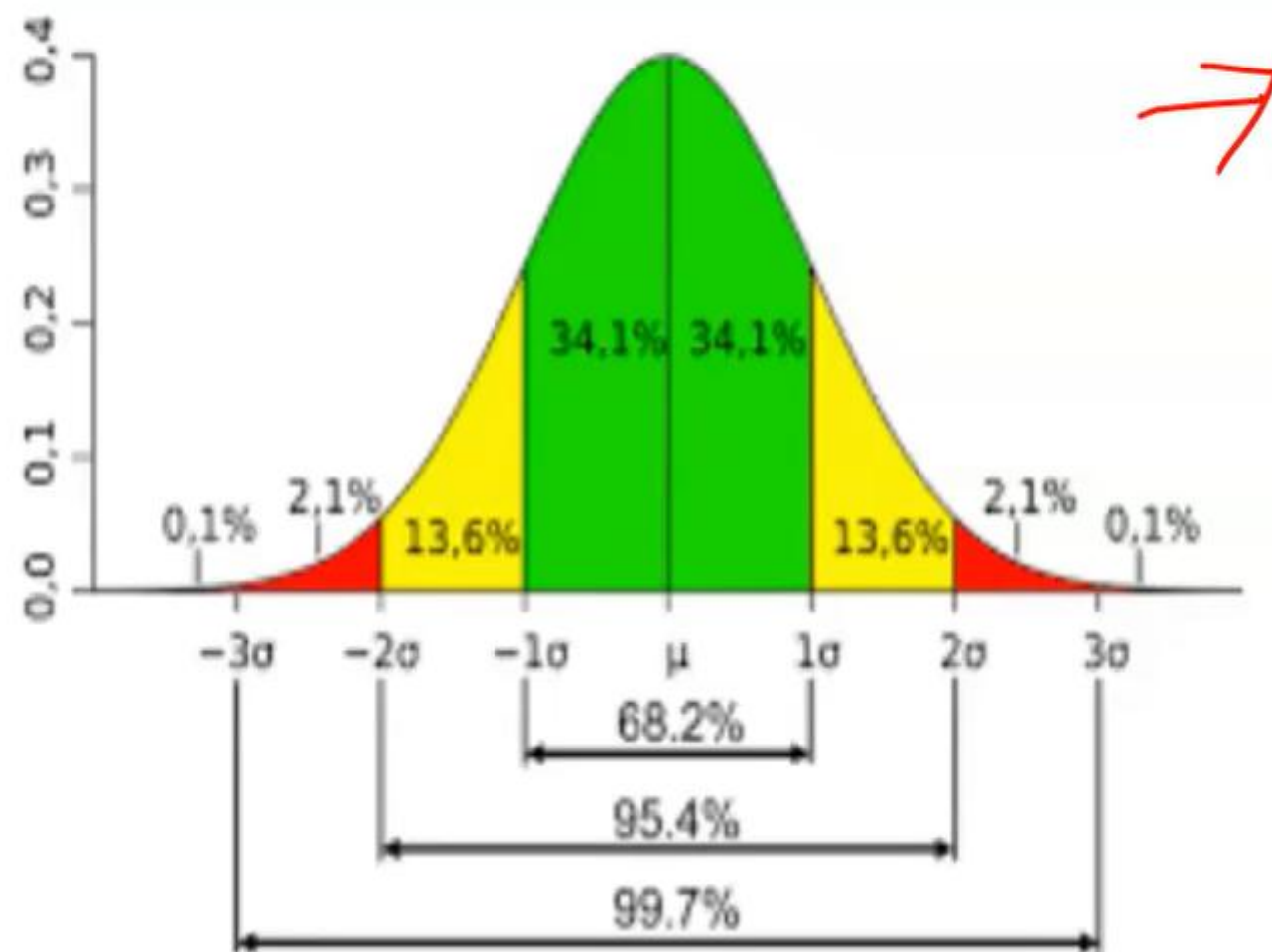


Normal Distribution

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Normal Distribution



Measure of Spread | Normal Distribution

- Approximately 68% of the data is within one standard deviation of the mean.
- Approximately 95% of the data is within two standard deviations of the mean.
- More than 99% of the data is within three standard deviations of the mean.
- This is known as the Empirical Rule.
- It is important to note that this rule only applies when the shape of the distribution of the data is bell-shaped and symmetric. We will learn more about this when studying the "Normal" or "Gaussian" probability distribution in later chapters.

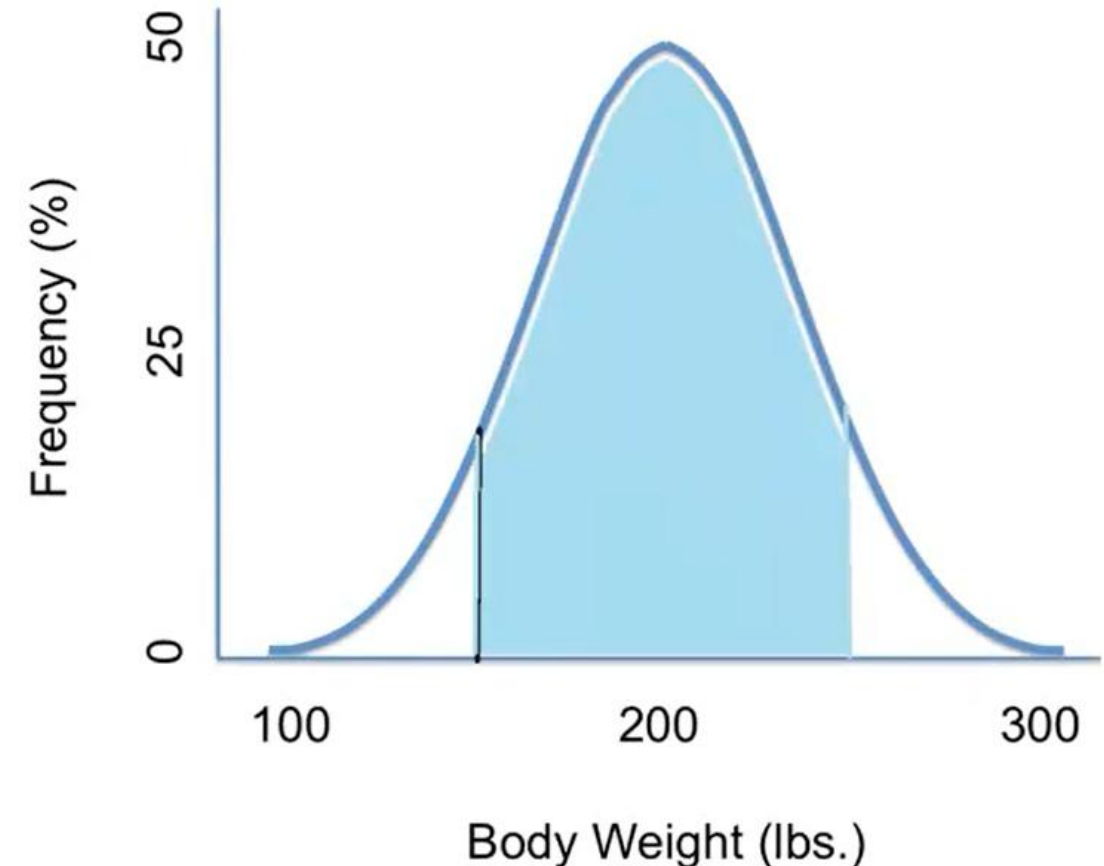
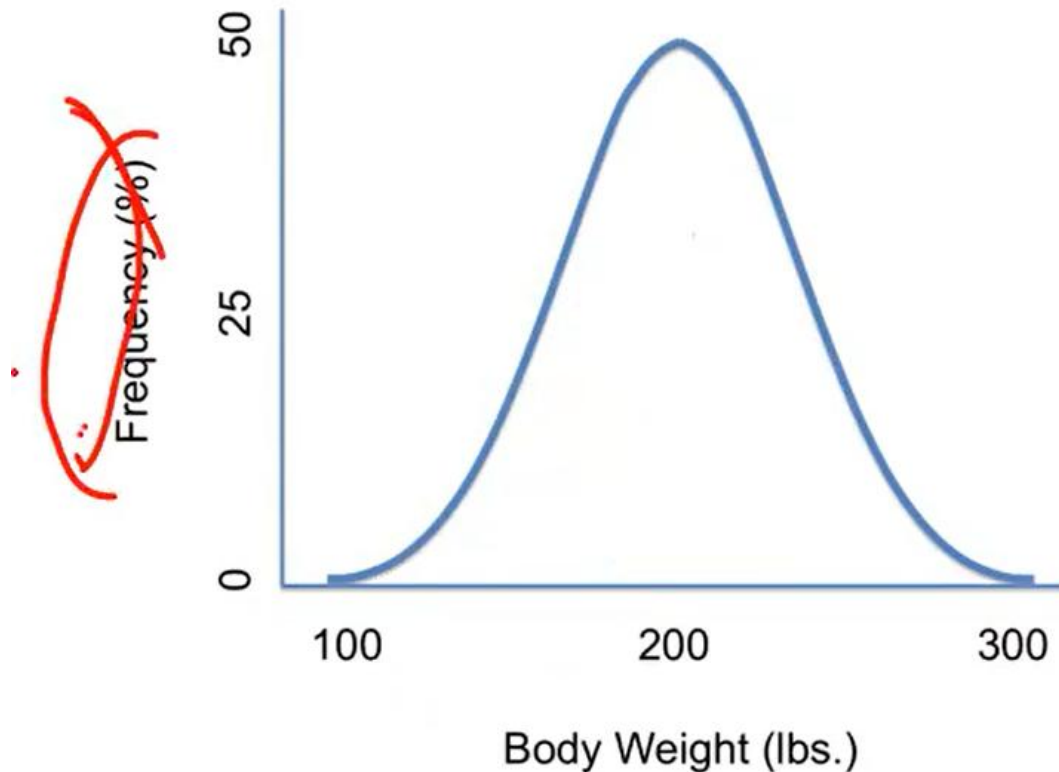


Probability Density Function

What is the probability that a person will weigh between 150 and 250 ?

Written in notation, the question becomes:

$$P(150 < Y < 250)$$



Cumulative Density Function

