**Chapter 6: Continuous Random Variable and Probability Distribution**

1. **Continuous Random Variable**

**Continuous** variables produce outcomes that come from a **measurement**.

(e.g. your annual salary, or your weight).

Text

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1. **Normal Distribution (mean, variance/standard deviation) variance = (standard deviation)^2**Diagram

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**Bell Shaped**

**Symmetrical**

**Mean, Median and Mode are Equal**

**Location is determined by the mean, μ.**

**Spread is determined by the standard deviation, σ.**

**The random variable has an infinite theoretical range: -∞ to +∞.**

1. **Calculating Normal Probabilities**Chart

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**Probability is measured by the area under the curve.**

**The total area under the curve is 1.0, and the curve is symmetric, so half is above the mean, half is below.**

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**The Standardized Normal Distribution (**Also known as the “Z” distribution)

Mean is 0.Chart, line chart

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Standard Deviation is 1.

1. **Given a Normal Probability. Find the X Value**

CASIO 570VN / CASIO 580VNA picture containing chart

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1. **Uniform Distribution**

Symmetrical

Also called a **rectangular distribution**

Any value between the smallest and largest is equally likely.

1. **Probability Density Function**

Graphical user interface, text, application, Word

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1. **Mean & Variance & Standard deviation**

Graphical user interface, application, Word

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Graphical user interface, application, Word

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