

Grade 12 Math of Data Management

MDM4U

Qinghao Hu

December 6, 2025

Contents

1	Probability Distributions	2
1.1	Probability Distributions	3
1.1.1	Definitions for Probability Distributions	3
1.2	Uniform Distributions	4
1.2.1	Different Distributions	4
1.2.2	Characteristics of Uniform Distribution	4
1.3	Binnomial Distributions	6
1.3.1	Example	6
1.3.2	Definitions	7
1.4	Geometric Distributions	8
1.4.1	Example	8
1.4.2	Definitions	8
1.5	Hypergeometric Distributions	9
1.5.1	Example	9
1.5.2	Definitions	9
2	Normal Distribution	10
2.1	Normal Distributions	11
2.1.1	Definitions	11

Chapter 2

Normal Distribution

2.1 Normal Distributions

2.1.1 Definitions

Definition 2.1.1 (Normal Distribution)

The properties of normal distributions can be described as this:

1. Graphical displays are mound-shaped histograms that are also **Bell-Shaped**
 2. The *MEAN*, *MEDIAN* and *MODE* fall on the line of symmetry
 3. Denoted by the notation $X \sim N(\mu, \sigma^2)$ where μ is the mean and σ is the standard deviation
 4. Modelled by a **NORMAL CURVE** where the curve passes through the midpoint of the top of each bar of the histogram of the data.
 5. The stadnard normal curve has a mean of 0 and a standard deviation of 1
-