

Unit 06 - The Normal Distribution

Content Area: **Math**
Course(s): **Prob/Stat A**
Time Period: **Marking Period 3**
Length: **6 weeks**
Status: **Published**

Unit Introduction

Standards

MA.S-ID.A.2	Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.
MA.S-ID.A.3	Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).
MA.S-ID.A.4	Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.
MA.S-MD.B.7	Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game).

Essential Questions

Content

- Section 6.1: Introduction (Pgs. 286-287)
- Section 6.2: Properties of a Normal Distribution (Pgs. 288-290)
- Section 6.3: The Standard Normal Distribution (Pg. 290-302)
- Section 6.4: Applications of the Normal Distribution (Pgs. 307-315)
- Section 6.5: The Central Limit Theorem (Pgs. 322-329)
- Section 6.6: The Normal Approximation to the Binomial Distribution (Pgs. 331-338)

Skills

- Identify distributions as symmetric or skewed
- Understand the properties of the normal distribution
- Use the Central Limit Theorem to solve problems involving sample means for large samples.

- Use the normal distribution as a model for measurements