

High School Mathematics III

Inferences and Conclusions from Data

Cluster: Summarize, represent, and interpret data on a single count or measurement variable.

- 1 Test predictions involving real-world events (e.g., experimental probability). [A.M.3HS.1](#)

Cluster: Understand and evaluate random processes underlying statistical experiments.

- 2 Approximate the likelihood of an event based on its probability (e.g., given a weather forecast, determine if it is likely to rain) and make appropriate real-world choices. [A.M.3HS.2](#)
- 3 Revise original predictions if necessary when predicting real-world events. [A.M.3HS.3](#)

Cluster: Make inferences and justify conclusions from sample surveys, experiments, and observational studies.

- 4 Draw conclusions from a given representation of data in real world situations. [A.M.3HS.4](#)
- 5 Use data from a survey to make assumptions about a larger population (e.g., from a survey about favorite color given to a small number of students in a school, assume that the results hold for the school). [A.M.3HS.5](#)
- 6 Use data from a randomized experiment to make real world predictions. [A.M.3HS.6](#)

Cluster: Use probability to evaluate outcomes of decisions.

- 7 Use probabilities to make fair decisions [A.M.3HS.7](#)
- 8 Analyze decisions and outcomes based on probability concepts. [A.M.3HS.8](#)

Linear and Polynomial Relationships

Cluster: Interpret the structure of expressions.

- 9 Identify an algebraic expression involving arithmetic operations to represent a real-world problem. [A.M.3HS.9](#)

Cluster: Apply rational expressions.

- 10 In real world problem situations, combine mixed numbers (i.e., recipes).
Instructional Note: Limit to halves. [A.M.3HS.10](#)

Cluster: Represent and solve equations graphically.

- 11 Interpret the meaning of the intersection of the two graphs. Instructional Note: Include linear and polynomial functions. [A.M.3HS.11](#)
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Mathematical Modeling**Cluster: Create equations that describe numbers or relationships.**

- 12 Create linear equations and inequalities in one variable and use them to solve problems. [A.M.3HS.12](#)
- 13 Create linear equations in two variables to represent relationships between quantities and graph equations on coordinate axes with labels and scales. [A.M.3HS.13](#)
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Cluster: Interpret functions that arise in applications in terms of a context.

- 14 Given real-world measures, demonstrate an understanding of domains and list possible values of domains. [A.M.3HS.14](#)
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Cluster: Analyze functions using different representations.

- 15 Compare and contrast two functions represented in different tables or graphs (e.g., Store A's Discount Table and Store B's Discount Table) to answer questions. [A.M.3HS.15](#)
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Cluster: Build a function that models a relationship between two quantities.

- 16 Given a real-world situation, complete a given table to answer questions. For example: [A.M.3HS.16](#)
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Cluster: Visualize relationships between two dimensional and three-dimensional objects.

- 17 Identify the shapes of two-dimensional crosssections of three-dimensional objects. [A.M.3HS.17](#)
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Cluster: Apply geometric concepts in modeling situations.

- 18 Use properties of geometric shapes to describe real world objects. [A.M.3HS.18](#)
- 19a Sketch a scale model using graph paper as needed (e.g., the layout of their house). [A.M.3HS.19A](#)
- 19b Interpret a scale model (e.g., locate specific rooms on a diagram of the school). [A.M.3HS.19B](#)