ALEKS®

High School Prep for Statistics

This course covers the topics shown below.
Students navigate learning paths based on their level of readiness.
Institutional users may customize the scope and sequence to meet curricular needs.

Curriculum (62 topics + 17 additional topics)

- Numbers (16 topics)

  - Integers (6 topics)
    - Integer addition: Problem type 1
    - Integer subtraction: Problem type 1
    - Integer multiplication and division
    - Order of operations with whole numbers
    - Order of operations with whole numbers and grouping symbols
    - Order of operations with integers

  - Decimals and Percents (10 topics)
    - Decimal place value: Hundreds to ten thousandths
    - Rounding decimals
    - Multiplication of a decimal by a power of ten
    - Division of a decimal by a power of ten
    - Signed decimal addition and subtraction
    - Converting between percentages and decimals
    - Converting a percentage to a fraction in simplest form
    - Converting a fraction to a percentage: Denominator of 20, 25, or 50
    - Writing a ratio as a percentage
    - Computing a percentage from a table of values

- Algebraic Expressions (8 topics)

  - Evaluating Expressions (5 topics)
    - Evaluating expressions with exponents: Problem type 1
    - Order of operations with integers and exponents
    - Evaluating an algebraic expression: Whole numbers with two operations
    - Evaluating a quadratic expression: Integers
    - Evaluating a linear expression: Integer multiplication with addition or subtraction

  - Combining Like Terms (2 topics)
    - Distributive property: Whole number coefficients
    - Combining like terms: Integer coefficients

  - Summation Notation (1 topics)
    - Introduction to summation notation

- Linear Equations (5 topics)

  - Writing Equations (1 topics)
    - Translating a sentence into a one-step equation

  - Solving Equations (4 topics)
    - Introduction to algebraic symbol manipulation
    - Solving a two-step equation with integers
    - Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
    - Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution

- Lines in the Coordinate Plane (9 topics)

  - Graphs and Intercepts (6 topics)
    - Reading a point in the coordinate plane
    - Plotting a point in the coordinate plane
    - Y-intercept of a line
    - X- and y-intercepts of a line given the equation in standard form
    - Graphing a line given its x- and y-intercepts
    - Graphing a line given its equation in slope-intercept form

  - Slope (3 topics)
    - Finding slope given the graph of a line on a grid
    - Writing the equation of a line given the y-intercept and another point
    - Graphing a line through a given point with a given slope

- Descriptive Statistics (18 topics)

  - Types of Variables (2 topics)
    - Classification of variables and levels of measurement
    - Discrete versus continuous variables

  - Graphical Displays (10 topics)
    - Interpreting a line graph
    - Interpreting a bar graph
    - Interpreting a double bar graph
    - Interpreting a pie chart
    - Computations from pie charts
    - Interpreting a stem-and-leaf display
    - Histograms for grouped data
    - Interpreting relative frequency histograms
    - Frequency polygons for grouped data
    - Cumulative distributions and ogives

  - Descriptive Measures (6 topics)
    - Mean, median, and mode: Computations
    - Mean, median, and mode: Comparisons
    - Weighted mean: Tabular data
    - Rejecting unreasonable claims based on average statistics
    - Percentiles
    - Sample standard deviation

- Counting and Probability (6 topics)

  - Counting (1 topics)
    - Factorial expressions

  - Probability (5 topics)
    - Introduction to the probability of an event
    - Probability of an event
    - Experimental and theoretical probability
    - Outcomes and event probability
    - Probabilities involving two rolls of a die: Decimal answers

- Other Topics Available(*) (17 additional topics)

  - Numbers (4 topics)
    - Simplifying a fraction
    - Introduction to addition or subtraction of fractions with different denominators
    - Fraction multiplication
    - Fraction division

  - Algebraic Expressions (3 topics)
    - Summation of indexed data
    - Introduction to the product rule of exponents
    - Power rules with positive exponents

  - Descriptive Statistics (2 topics)
    - Making reasonable inferences based on proportion statistics
    - Population standard deviation

  - Counting and Probability (8 topics)
    - Combinations
    - Permutations
    - Probability of independent events: Decimal answers
    - Probability of dependent events
    - Probabilities of draws with replacement
    - Word problem involving the probability of a union or an intersection
    - Conditional probability: Basic
    - Intersection and conditional probability

Other Topics Available By default, these topics are NOT included in the course, but can be added using the content editor in the Teacher Module.