DesCartes: A Continuum of Learning®

Mathematics

Goal: Statistics and Probability

RIT Score Range: 231 - 240
Statements Last Updated: Mar 10, 2014

Skills and Concepts to Enhance (73% Probability*) 221 - 230	Skills and Concepts to Develop (50% Probability*) 231 - 240	Skills and Concepts to Introduce (27% Probability*) 241 - 250
Interpreting Categorical and Quantitative Data	**Interpreting Categorical and Quantitative Data**	**Interpreting Categorical and Quantitative Data**
• Determines appropriate intervals and/or scale for a bar graph • Determines the average (mean) of a simple set of data • Determines the mean of a complex set of data (e.g., fractions, integers, many data points) • Solves simple problems involving mean • Solves problems with missing data when the mean is known • Determines the middle value (median) from a simple set of data • Determines the spread (range) from a simple set of data • Predicts from line graphs • Predicts from plotted data	• Determines appropriate intervals and/or scale for a bar graph • Interprets data given in horizontal and vertical bar graphs to solve problems • Reads and interprets data in box-and-whisker plots • Determines the mean of a complex set of data (e.g., fractions, integers, many data points) • Solves problems with missing data when the mean is known • Determines the median from a complex set of data (e.g., not in order, many data points) • Determines the range of a complex set of data • Estimates line of best fit to make predictions	• Reads and interprets data in tables • Reads and interprets data in box-and-whisker plots • Reads and interprets interquartile range in box-and-whisker plots • Reads and interprets data in stem-and-leaf plots • Determines the range of a complex set of data • Identifies outliers on a data display (e.g., uses interquartile range to identify outliers on a box-and-whisker plot) • Determines the correlation for a set of data • Identifies a set of data with a given mean, median, and/or mode
Using Sampling and Probability to Make Decisions	**Using Sampling and Probability to Make Decisions**	**Using Sampling and Probability to Make Decisions**
• Determines likelihood using tree diagrams • Determines probability - must determine size of sample space • Modifies sample space to change the probability of an event • Determines the complement of a simple event • Determines the possible outcomes for a simple probability experiment using spinners • Determines the possible outcomes for a simple probability experiment using dart boards • Determines the number of possible combinations of given items • Determines the outcome of simple multiple events • Predicts the sample space, based on the outcome of an experiment - tally sheet • Uses the results of probability experiments or events to predict future events • Computes probability as a fraction, given equivalent forms • Identifies whether predictions are based on theoretical or experimental probability • Determines the most accurate sample for a situation • Describes the population based on a given sample	• Determines probability - must determine size of sample space • Modifies sample space to change the probability of an event • Determines the probability of independent simple compound events • Determines the possible outcomes for a simple probability experiment using dart boards • Determines the outcome of simple multiple events • Uses the results of probability experiments or events to predict future events • Predicts from an analysis of data and statistical measures • Predicts from charts and tables • Describes the population based on a given sample	• Determines probability using counting procedures • Determines probability using tables • Determines the complement of a complex event • Determines probability using an area model • Uses theoretical probability to predict future events • Predicts from an analysis of data and statistical measures • Describes the population based on a given sample
New Vocabulary: tails	*New Vocabulary:* box-and-whisker plot, data point, interquartile range, middle, representative sample, sample	*New Vocabulary:* None
New Signs and Symbols: None	*New Signs and Symbols:* °F degrees Fahrenheit	*New Signs and Symbols:* • outlier

Explanatory Notes
* At the range mid-point, this is the probability students would correctly answer items measuring these concepts and skills. Both data from test items and review by NWEA curriculum specialists are used to place Learning Continuum statements into appropriate RIT ranges. Blank cells indicate data are limited or unavailable for this range or document version.