DesCartes: A Continuum of Learning®

Mathematics
Goal: Statistics and Probability

RIT Score Range: 221 - 230
Statements Last Updated: Mar 10, 2014

Skills and Concepts to Enhance (73% Probability*) 211 - 220	Skills and Concepts to Develop (50% Probability*) 221 - 230	Skills and Concepts to Introduce (27% Probability*) 231 - 240
Interpreting Categorical and Quantitative Data	Interpreting Categorical and Quantitative Data	Interpreting Categorical and Quantitative Data
• Solves problems using pictographs • Solves problems using bar graphs • Reads and interprets data in scatter plots • Reads and interprets data in line plots • Determines the average (mean) of a simple set of data • Solves simple problems involving mean • Determines the middle value (median) from a simple set of data • Predicts from plotted data • Describes a trend in the 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
Using Sampling and Probability to Make Decisions	Using Sampling and Probability to Make Decisions	Using Sampling and Probability to Make Decisions
• Determines all possible outcomes • Determines the probability for a simple experiment using one die • Determines probability from a real-world situation - number of possible outcomes given • Determines the probabilities for a simple experiment using a frequency table - must determine size of sample space • Determines probability when drawing objects from containers - 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 number of possible combinations of given items • Predicts the sample space, based on the outcome of an experiment - tally sheet • Uses systematic lists to represent problems	• 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
New Vocabulary: fastest, fitted line, mean, number cube, outcome, scatter plot	*New Vocabulary:* tails	*New Vocabulary:* box-and-whisker plot, data point, interquartile range, middle, representative sample, sample
	New Signs and Symbols: None	
New Signs and Symbols: { } set notation, lb pound, P( ) probability, % percent		*New Signs and Symbols:* °F degrees Fahrenheit