

## DesCartes: A Continuum of Learning®

Goal: Statistics and Probability

**Mathematics** 

RIT Score Range:241 - 250Statements Last Updated:Mar 10, 2014

Skills and Concepts to Enhance (73% Probability*) 231 - 240	Skills and Concepts to Develop (50% Probability*) 241 - 250	Skills and Concepts to Introduce (27% Probability*) 251 - 260
Interpreting Categorical and Quantitative Data	Interpreting Categorical and Quantitative Data	Interpreting Categorical and Quantitative Data
<ul> <li>Determines appropriate intervals and/or scale for a bar graph</li> <li>Interprets data given in horizontal and vertical bar graphs to solve problems</li> <li>Reads and interprets data in box-and-whisker plots</li> <li>Determines the mean of a complex set of data (e.g., fractions, integers, many data points)</li> <li>Solves problems with missing data when the mean is known</li> <li>Determines the median from a complex set of data (e.g., not in order, many data points)</li> </ul>	<ul> <li>Reads and interprets data in tables</li> <li>Reads and interprets data in box-and-whisker plots</li> <li>Reads and interprets interquartile range in box-and-whisker plots</li> <li>Reads and interprets data in stem-and-leaf plots</li> <li>Determines the range of a complex set of data</li> <li>Identifies outliers on a data display (e.g., uses interquartile range to identify outliers on a box-and-whisker plot)</li> <li>Determines the correlation for a set of data</li> <li>Identifies a set of data with a given mean, median, and/or mode</li> </ul>	<ul> <li>Interpreting Categorical and Quantitative Data</li> <li>Interprets the meaning of slope and intercepts in problem solving situations</li> <li>Reads and interprets interquartile range in box-and-whisker plots</li> <li>Solves complex problems involving mean</li> <li>Identifies outliers on a data display (e.g., uses interquartile range to identify outliers on a box-and-whisker plot)</li> <li>Computes and compares mean, median, mode, and range in simple examples to demonstrate that they may differ for a given set of data</li> </ul>
<ul> <li>Determines the range of a complex set of data</li> <li>Estimates line of best fit to make predictions</li> </ul>		
Using Sampling and Probability to Make Decisions	Using Sampling and Probability to Make Decisions	Using Sampling and Probability to Make Decisions
<ul> <li>Determines probability - must determine size of sample space</li> <li>Modifies sample space to change the probability of an event</li> <li>Determines the probability of independent simple compound events</li> <li>Determines the possible outcomes for a simple probability experiment using dart boards</li> <li>Determines the outcome of simple multiple events</li> <li>Uses the results of probability experiments or events to predict future events</li> <li>Predicts from an analysis of data and statistical measures</li> <li>Predicts from charts and tables</li> <li>Describes the population based on a given sample</li> </ul>	<ul> <li>Determines probability using counting procedures</li> <li>Determines probability using tables</li> <li>Determines the complement of a complex event</li> <li>Determines probability using an area model</li> <li>Uses theoretical probability to predict future events</li> <li>Predicts from an analysis of data and statistical measures</li> <li>Describes the population based on a given sample</li> </ul>	<ul> <li>Determines the probabilities of complex compound events (independent)</li> <li>Uses random sampling techniques</li> </ul>
New Vocabulary: box-and-whisker plot, data point, interquartile range,	New Vocabulary: None	New Vocabulary: None
middle, representative sample, sample New Signs and Symbols: °F degrees Fahrenheit	New Signs and Symbols: • outlier	New Signs and Symbols: None

**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.

1