

## Math: Statistics and Probability: Interpreting Categorical and Quantitative Data

### Students: DesCartes Statements:

#### Students:

##### RIT Above 260:

- Identifies outliers on a data display (e.g., uses interquartile range to identify outliers on a box-and-whisker plot)
- Reads and interprets interquartile range in box-and-whisker plots

#### Students:

##### RIT 251-260:

- Computes and compares mean, median, mode, and range in simple examples to demonstrate that they may differ for a given set of data
- Identifies outliers on a data display (e.g., uses interquartile range to identify outliers on a box-and-whisker plot)
- Interprets the meaning of slope and intercepts in problem solving situations
- Reads and interprets interquartile range in box-and-whisker plots
- Solves complex problems involving mean

#### Students:

##### RIT 241-250:

- Determines the correlation for a set of data
- Determines the range of a complex set of data
- Identifies a set of data with a given mean, median, and/or mode
- Identifies outliers on a data display (e.g., uses interquartile range to identify outliers on a box-and-whisker plot)
- Reads and interprets data in box-and-whisker plots
- Reads and interprets data in stem-and-leaf plots
- Reads and interprets data in tables
- Reads and interprets interquartile range in box-and-whisker plots

#### Students:

##### RIT 231-240:

- Determines appropriate intervals and/or scale for a bar graph
- Determines the mean of a complex set of data (e.g., fractions, integers, many data points)
- 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
- Interprets data given in horizontal and vertical bar graphs to solve problems
- Reads and interprets data in box-and-whisker plots
- Solves problems with missing data when the mean is known

#### Students:

##### RIT 221-230:

- 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)
- 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
- Solves problems with missing data when the mean is known
- Solves simple problems involving mean

#### Students:

##### RIT 211-220:

- Describes a trend in the data
- Determines the average (mean) of a simple set of data
- Determines the middle value (median) from a simple set of data
- Predicts from plotted data
- Reads and interprets data in line plots
- Reads and interprets data in scatter plots
- Solves problems using bar graphs
- Solves problems using pictographs
- Solves simple problems involving mean

**Students:****RIT 201-210:**

- Describes a trend in the data
- Determines the middle value (median) from a simple set of data
- Draws conclusions from data - bar graphs
- Organizes data to create simple bar graphs
- Solves problems using bar graphs
- Solves problems using dual bar graphs
- Solves problems using pictographs

**Students:****RIT 191-200:**

- Describes a trend in the data
- Interprets a chart or table - calculation required
- Interprets a pictograph - calculation required
- Interprets a simple bar graph - calculation required
- Reads and interprets data from a bar graph
- Reads and interprets data from a pictograph
- Reads and interprets dual bar graphs

**Students:****RIT 181-190:**

- Interprets a chart or table - calculation required
- Interprets a simple bar graph - calculation required
- Interprets simple graphs or tables
- Reads a simple bar graph - comparisons (e.g., largest, smallest, most often, least often)
- Reads a simple bar graph - numbers (e.g., how many)
- Reads and interprets data from a bar graph
- Reads and interprets data from a pictograph
- Solves simple problems based on data from bar graphs
- Solves simple problems based on data from pictographs

**Students:****RIT 171-180:**

- Compares data from simple graphs (e.g., largest, smallest, most often, least often)
- Interprets simple graphs or tables
- Reads a chart or table - comparisons
- Reads a chart or table - numbers
- Reads a simple bar graph - comparisons (e.g., largest, smallest, most often, least often)
- Reads a simple bar graph - numbers (e.g., how many)
- Reads a simple pictograph - comparisons (e.g., largest smallest, most often, least often)
- Solves simple problems based on data from bar graphs
- Solves simple problems based on data from pictographs

**Students:****RIT 161-170:**

- Compares data from simple graphs (e.g., largest, smallest, most often, least often)
- Displays data appropriately - bar graph - scale is 1 to 1
- Reads a chart or table - numbers
- Reads a simple bar graph - comparisons (e.g., largest, smallest, most often, least often)
- Reads a simple pictograph - comparisons (e.g., largest smallest, most often, least often)

**Students:****RIT Below 161:**

- Reads a simple pictograph - comparisons (e.g., largest smallest, most often, least often)