

NCTM Content Standards Assessment Rubric



Data Analysis & Probability – Drill Sheets

Student's Name: _____ Assignment: _____ Level: _____

	Level 1	Level 2	Level 3	Level 4
Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them	<ul style="list-style-type: none"> Demonstrates a limited ability to formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them 	<ul style="list-style-type: none"> Demonstrates a basic ability to formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them 	<ul style="list-style-type: none"> Demonstrates a good ability to formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them 	<ul style="list-style-type: none"> Demonstrates a thorough ability to formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them
Select and use appropriate statistical methods to analyze data	<ul style="list-style-type: none"> Demonstrates a limited ability to select and use appropriate statistical methods to analyze data 	<ul style="list-style-type: none"> Demonstrates a basic ability to select and use appropriate statistical methods to analyze data 	<ul style="list-style-type: none"> Demonstrates a good ability to select and use appropriate statistical methods to analyze data 	<ul style="list-style-type: none"> Demonstrates a thorough ability to select and use appropriate statistical methods to analyze data
Develop and evaluate inferences and predictions that are based on data	<ul style="list-style-type: none"> Demonstrates a limited ability to develop and evaluate inferences and predictions that are based on data 	<ul style="list-style-type: none"> Demonstrates a basic ability to develop and evaluate inferences and predictions that are based on data 	<ul style="list-style-type: none"> Demonstrates a good ability to develop and evaluate inferences and predictions that are based on data 	<ul style="list-style-type: none"> Demonstrates a thorough ability to develop and evaluate inferences and predictions that are based on data

WEAKNESSES:

NEXT STEPS:

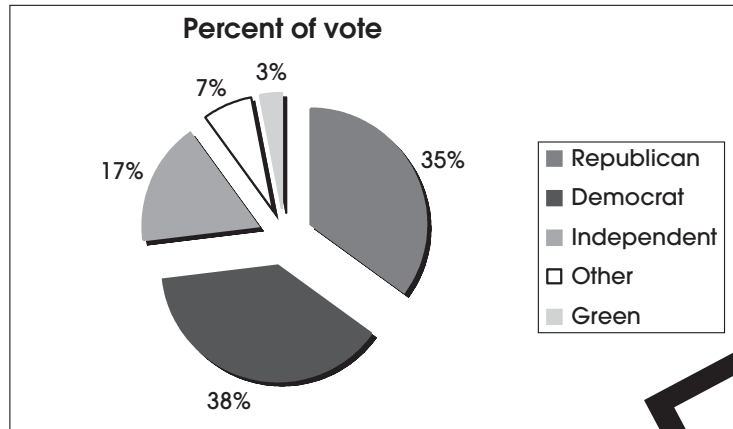
WEAKNESSES:

STRENGTHS:

SAMPLE



15a) The following pie chart shows the result of a governor's election. It shows how many votes the candidate for each party received.



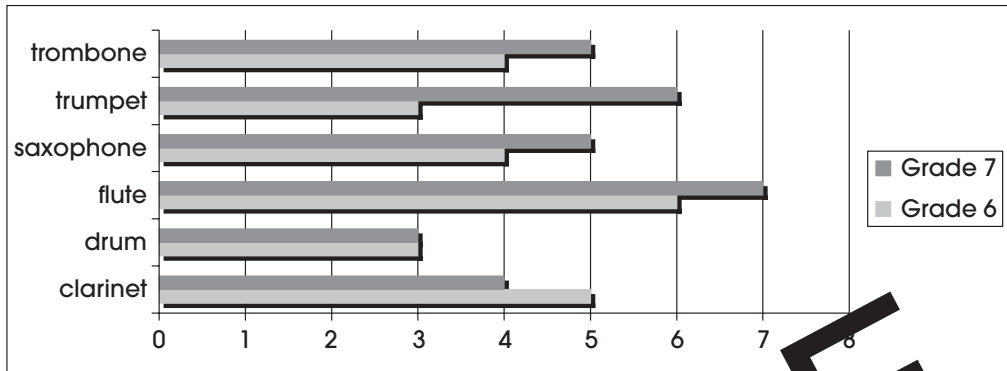
- i) The largest amount of people voted for a candidate from which party? _____
- ii) The smallest amount of people voted for a candidate from which party? _____
- iii) About 55 percent of the people voted for which two parties? _____
- iv) About 73 percent of the people voted for which two parties? _____
- v) What percent of the people voted for either the Green Party candidate or an "other" candidate? _____
- vi) Ten percent more voters voted for the Independent Party candidate than voted for the candidate from which party? _____
- vii) What is the range of votes for this pie chart? _____
- viii) What is the ratio of votes for Republican candidates to "other" candidates? _____
- ix) How many more voters voted for the Republican candidate than the Independent candidate? _____
- x) The difference in votes between what two groups is 21 percent? _____
- xi) The number of votes received by the Green party candidate is equal to the difference in votes between what two parties? _____
- xii) If 3000 people voted in this election, how many votes did the Green Party get? _____
- xiii) If 3000 people voted in this election, how many votes did other parties get? _____
- xiv) If 3000 people voted in this election, how many votes did the Independent Party get? _____
- xv) If 3000 people voted in this election, how many votes did the Republican Party receive? _____
- xvi) If 3000 people voted in this election, how many votes did the Democrat Party receive? _____

SAMPLE



Review B

a) The graph below shows the number of students who play different instruments in the Carroll School band.



- i) How many total sixth graders are in the band? _____
- ii) How many total seventh graders are in the band? _____
- iii) What instrument is played by the greatest number of sixth and seventh graders? _____
- iv) What instrument is played by the least number of sixth and seventh graders? _____
- v) What instrument is played by an equal number of sixth and seventh graders? _____
- vi) How many more seventh graders play trombone than sixth graders? _____
- vii) Which instrument is played by twice as many seventh graders as sixth graders? _____
- viii) Which instrument is played by more sixth graders than seventh graders? _____
- ix) What fraction of the sixth graders play clarinet? _____
- x) What fraction of the seventh graders play saxophone? _____
- xi) What is the ratio of sixth grade flute players to sixth grade drum players? _____
- xii) What is the ratio of seventh grade clarinet players to seventh grade trumpet players? _____
- xiii) What percent of the sixth graders play drums? _____
- xiv) What percent of the seventh graders play trumpet? _____
- xv) What percent of the total sixth and seventh graders play flute? _____
- xvi) What percent of the total sixth and seventh graders play saxophone? _____

SAMPLE

Proportions and Fractions



The tally chart below shows how people responded to a question about ice cream flavors. Work with a partner or small group to answer the questions below.



Flavor	Student's responding
Vanilla	/////
Chocolate	///// /////
Butternut	///
Mint	///// /
Rocky road	//
Watermelon	///

a) What question might students have been asked in order to get the results shown on this chart?

b) List the flavors in order from most votes to least votes.

c) Identify how many students were asked to participate in this chart.

d) Make three proportions for this chart (example, what is the ratio of students who chose chocolate to students who chose watermelon).

e) Make three fractions based on this chart (example, what fraction of the total students selected rocky road).

f) As a group, decide what type of graph best shows this data. Then, put this data into the graph.