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	• Demonstrates a limited ability to formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them	• Demonstrates a basic ability to formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them	• Demonstrates a good ability to formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them	• 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	• Demonstrates a limited ability to select and use appropriate statistical methods to analyze data	• Demonstrates a basic ability to select and use appropriate statistical methods to analyze data	• Demonstrates a good ability to select and use appropriate statistical methods to analyze data	• 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	• Demonstrates a limited ability to develop and evaluate inferences and predictions that are based on data	• Demonstrates a basic ability to develop and evaluate inferences and predictions that are based on data	• Demonstrates a good ability to develop and evaluate inferences and predictions that are based on data	• Demonstrates a thorough ability to develop and evaluate inferences and predictions that are based on data

STRENGTHS:

WEAKNESSES:

NEXT STEPS:

8 Minutes

12a) **The Museum of Science for Children has the following game in its probability room. Students press a button releasing a disc. The disc falls on one of the numbers on the game board below.**

Ex: What is the probability that you will land on the number 5? __1 in 10__

1	2	3	4	5
6	7	8	9	10

i) What is the probability that you will land on an odd number? _____

ii) What is the probability that you will land on an even number? _____

iii) What is the ratio of odd numbers to even numbers? _____

iv) What percent of the game board is made of white squares? _____

v) What percent of the game board is made of light gray squares? _____

vi) What fraction of the game board is made of dark gray squares? _____

vii) What fraction of the squares have black numbers? _____

viii) What fraction of the squares have white numbers? _____

ix) What is the ratio of white numbers to black numbers? _____

x) What percent of the numbers on the board are even and less than 10? _____

xi) What are your chances of landing on a light gray square? _____

xii) What are your chances of landing on a dark gray square with an odd number? _____

xiii) What are your chances of landing on a white square with an odd number? _____

xiv) What are your chances of landing on a light gray square with an odd number? _____

xv) What are you more likely to land on, a dark gray square with an even number or a white square with an odd number? _____

xvi) What are you more likely to land on, a dark gray square with an odd number, a light gray square with an odd number, or a square with white letters? _____
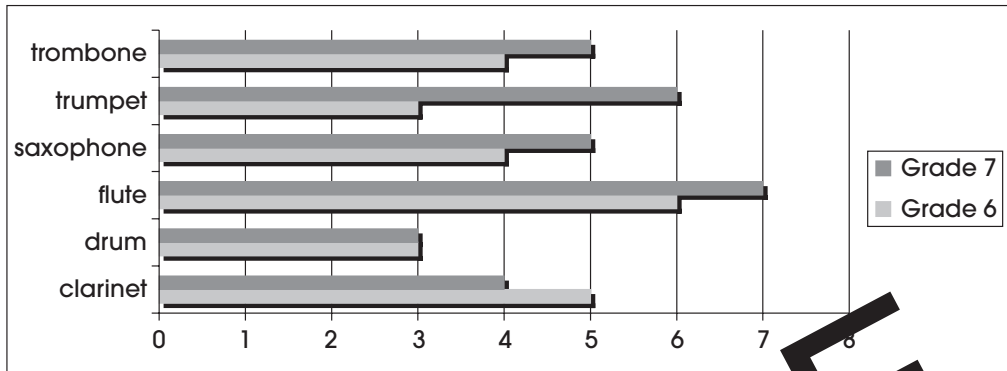
Reflection

Create your own game board like this one. Write six probability statements using your board.

Review B

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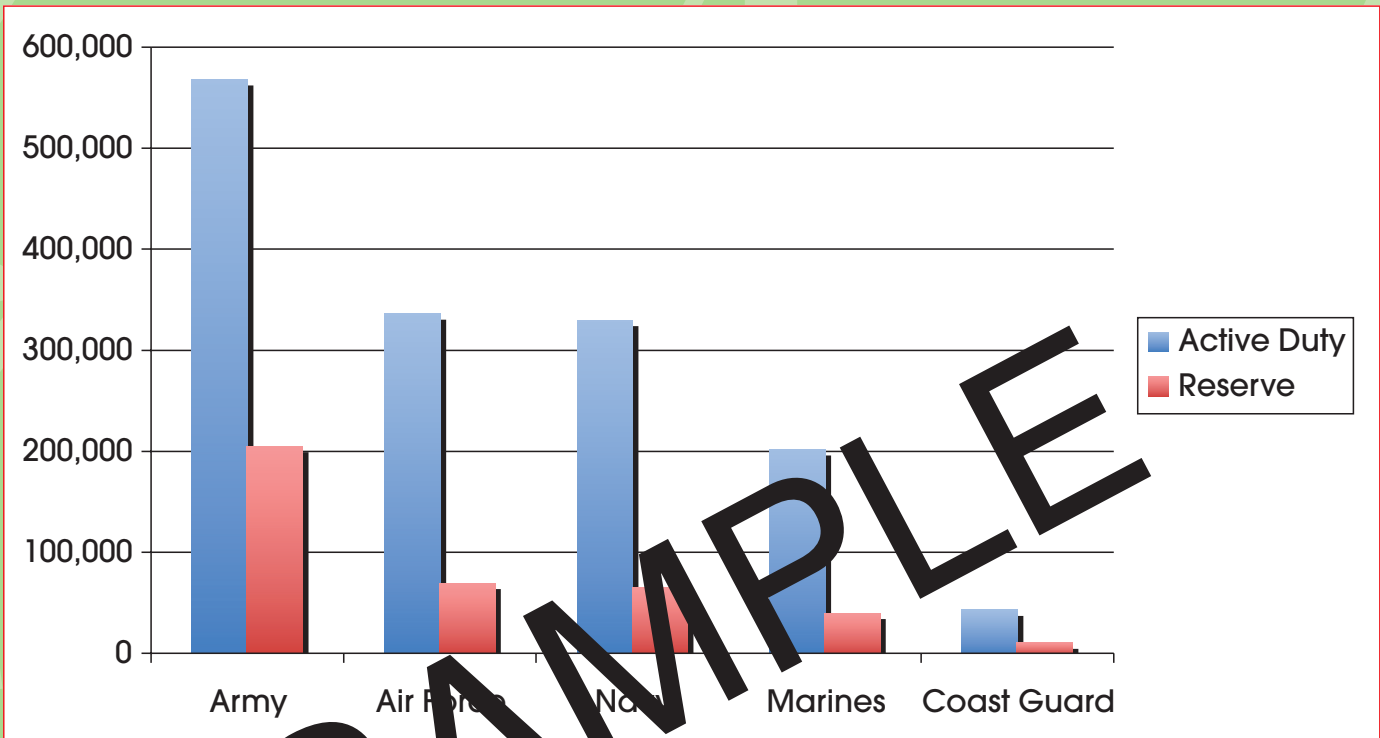

i) How many total sixth graders are in the band?　　　　　_____

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?　　　　　　　　　　　　　　　　　　_____

Ordering

The graph below shows the size of the U.S. military forces. Working with a partner or in a small group, use this graph to complete the activity.

a) List the armed forces active duty sizes from least to greatest.

_____   _____   _____   _____   _____

b) List the armed forces reserved sizes from least to greatest.

_____   _____   _____   _____   _____

c) List three comparisons that can be drawn between the armed forces.

_____   _____   _____

d) List four conclusions that can be drawn from this data.

_____   _____   _____   _____

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