NCTM Process Standards Rubric

Data Analysis & Probability – Drill Sheets

Drills (columns, reading order): Warm-up 1, Timed Drill 1, Timed Drill 2, Warm-up 2, Timed Drill 3, Timed Drill 4, Warm-up 3, Timed Drill 5, Timed Drill 6, Warm-up 4, Timed Drill 7, Timed Drill 8, Warm-up 5, Timed Drill 9, Warm-up 6, Timed Drill 10, Timed Drill 11, Review A, Review B, Review C

Expectations

Instructional programs from pre-kindergarten through grade 12 should enable all students to:

GOAL 1: Problem Solving
- build new mathematical knowledge through problem solving;
- solve problems that arise in mathematics and in other contexts;
- apply and adapt a variety of appropriate strategies to solve problems;
- monitor and reflect on the process of mathematical problem solving.

GOAL 2: Reasoning & Proof
- recognize reasoning and proof as fundamental aspects of mathematics;
- make and investigate mathematical conjectures;
- develop and evaluate mathematical arguments and proofs;
- select and use various types of reasoning and methods of proof.

GOAL 3: Communication
- organize and consolidate their mathematical thinking through communication;
- communicate their mathematical thinking coherently and clearly to peers, teachers, and others;
- analyze and evaluate the mathematical thinking and strategies of others;
- use the language of mathematics to express mathematical ideas precisely.

GOAL 4: Connections
- recognize and use connections among mathematical ideas;
- understand how mathematical ideas interconnect and build on one another to produce a coherent whole;
- recognize and apply mathematics in contexts outside of mathematics.

GOAL 5: Representation
- create and use representations to organize, record, and communicate mathematical ideas;
- select, apply, and translate among mathematical representations to solve problems;
- use representations to model and interpret physical, social, and mathematical phenomena.

8a) Jonathan's marble collection is shown below.

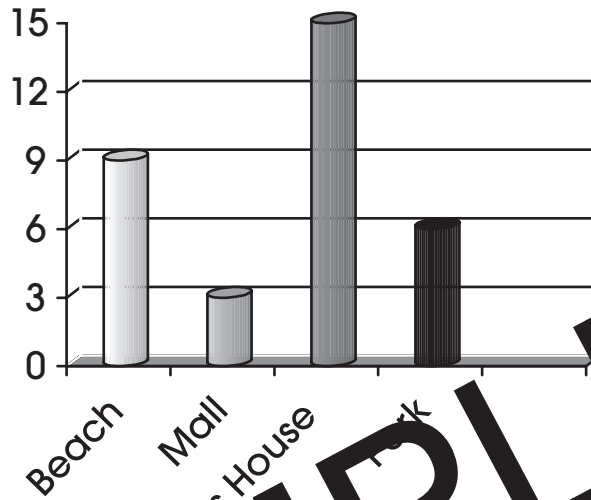Ex: If you put these marbles in a bag, what color are you less likely to pick? <u>orange</u>

Blue	Orange	Green	Gray	Purple

1. How many marbles are there in all?   _____

2. How many marbles are blue?   _____

3. How many marbles are orange?   _____

4. How many marbles are green?   _____

5. How many more marbles are blue than orange?   _____

6. How many marbles are gray, green, or purple?   _____

7. If you put these marbles in a bag,
   what color are you **most likely** to pick?   _____

8. If you put these marbles in a bag, are you **less likely**
   to pick a gray marble or an orange marble?   _____

9. How many gray marbles are there?   _____

10. How many marbles are not blue?   _____

NAME: _____

Review C

a) The chart below shows the different favorite places the students of Mr. Sorenson's class like to spend time.

1. What was the favorite place to spend time? _____

2. What was the least favorite place to spend time? _____

3. How many students took this survey? _____

4. How many students chose the beach? _____

5. How many students chose the mall? _____

6. How many students chose their friend's house? _____

7. How many students chose the park? _____

8. How many more students chose the beach than the mall? _____

9. How many more students chose their friend's house than the park? _____

10. Suppose another student was added to this chart. What would his or her favorite place most likely be? _____

Class Survey

Survey the class and tally up how many people put each topping listed in the chart below on their hamburger.
Color in the chart with how many people liked each topping.

1. How many people like vegetables on their hamburger? _____

2. How many people like cheese on their hamburger? _____

3. How many people like mustard and ketchup? _____

SAMPLE

	Pickle	Lettuce	Cheese	Tomato	Onion	Mustard	Ketchup
15							
14							
13							
12							
11							
10							
9							
8							
7							
6							
5							
4							
3							
2							
1							

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