Data Signal Sort

Decide whether each data set gives numbers or categories.

MA.912.DP.1.1 "Given a set of data, select an appropriate method to represent the data, depending on whether it is numerical or categorical data and on whether it is univariate or bivariate."

NAME _____ DATE _____

NUMERICAL DATA

Numerical data give amounts that can be measured or counted. A dot plot or histogram can show how the values are distributed.

Backpack mass in kilograms

CATEGORICAL DATA

Categorical data sort people or objects into named groups. A bar graph can compare the count in each group.

Weather conditions at sunrise

1 SORT

6 items

Circle NUMBERS or CATEGORIES for each item, then choose two items and explain which clue helped you sort each one.

1. Eye colors of students in a drama club — NUMBERS / CATEGORIES

2. Favorite school lunch choices — NUMBERS / CATEGORIES

3. Miles traveled by cyclists in a race — NUMBERS / CATEGORIES

4. Types of music selected by survey respondents — NUMBERS / CATEGORIES

5. Time, in seconds, runners take to finish a course — NUMBERS / CATEGORIES

6. Number of pages read by each student this week — NUMBERS / CATEGORIES

2 PROVE IT

Explain your thinking

Pick two items from Part 1. For each one, tell how you knew where it belonged.

ITEM # _____ **HOW I KNEW** _____

ITEM # _____ **HOW I KNEW** _____

3 MAKE YOUR OWN

One of each

Write one new example of NUMBERS data and one new example of CATEGORIES data.

NUMBERS _____

CATEGORIES _____

CHALLENGE

Choose one example you wrote. Name a graph that fits the data and explain why.

ANSWER KEY

Data Signal Sort

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Eye colors of students in a drama club	**CATEGORIES**	Eye color is a named group, not an amount.
2	Favorite school lunch choices	**CATEGORIES**	Lunch choices are labels for groups.
3	Miles traveled by cyclists in a race	**NUMBERS**	Miles are measured amounts.
4	Types of music selected by survey respondents	**CATEGORIES**	Music types are named groups.
5	Time, in seconds, runners take to finish a course	**NUMBERS**	Time in seconds is a measured amount.
6	Number of pages read by each student this week	**NUMBERS**	Pages read is a count.

PART 2 · PROVE IT

Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 · MAKE YOUR OWN (SAMPLE ANSWERS)

- **NUMBERS**: Number of goals scored by each soccer team
- **CATEGORIES**: Kinds of pets owned by students

Challenge: A bar graph fits kinds of pets owned by students because the data are categories, and the bar heights can show the count in each kind.

Items 1, 2, and 4 are CATEGORIES. Items 3, 5, and 6 are NUMBERS. Accept other valid examples and graph choices when the explanation matches the data type.