Data Type Detectives

Sort data, explain your choices, and clean a spreadsheet column.

GDA.DSP.B "Data arise from a context and come in two types: quantitative (continuous or discrete) and categorical. Technology can be used to "clean" and organize data, including very large data sets..."

NAME _____ DATE _____

QUANTITATIVE

A quantitative field records a count or measurement rather than a group label. Its values tell how much or how many.

Runner's distance in kilometers: 4.5

CATEGORICAL

A categorical field records a group, name, or code. A code can use digits without being a count or measurement.

Library book genre: mystery

1 SORT

8 items

Circle QUANTITY or CATEGORY for each item, then choose one item of each type and explain your choices in Part 2 PROVE IT.

1.	Number of pets in a home: 2	QUANTITY	CATEGORY
2.	Lunch choice: salad	QUANTITY	CATEGORY
3.	Bus route code: 17	QUANTITY	CATEGORY
4.	Rainfall in millimeters: 12.4	QUANTITY	CATEGORY
5.	Minutes spent reading yesterday: 35	QUANTITY	CATEGORY
6.	Price of a notebook in dollars: 3.25	QUANTITY	CATEGORY
7.	Jersey number: 8	QUANTITY	CATEGORY
8.	Favorite music style: jazz	QUANTITY	CATEGORY

2 PROVE IT

Explain your thinking

Choose one item of each type and explain your choices in Part 2 PROVE IT.

ITEM # _____ **HOW I KNEW** _____

ITEM # _____ **HOW I KNEW** _____

3 MAKE YOUR OWN

One of each

In Part 3 MAKE YOUR OWN, write one new example of a quantitative field and one of a categorical field; include a possible value for each.

QUANTITY _____

CATEGORY _____

CHALLENGE

A spreadsheet column for daily water use contains "2 L," "2.5 liters," "3 L," and "1.5 liters." Describe how you would clean the column in the spreadsheet, list the four values as numbers in liters, and name the data type.

ANSWER KEY # Data Type Detectives

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Number of pets in a home: 2	**QUANTITY**	The value counts pets.
2	Lunch choice: salad	**CATEGORY**	The value names a food choice.
3	Bus route code: 17	**CATEGORY**	The digits identify a route, not an amount.
4	Rainfall in millimeters: 12.4	**QUANTITY**	The value measures rainfall.
5	Minutes spent reading yesterday: 35	**QUANTITY**	The value measures elapsed time.
6	Price of a notebook in dollars: 3.25	**QUANTITY**	The value gives a monetary amount.
7	Jersey number: 8	**CATEGORY**	The number identifies a player rather than measuring an amount.
8	Favorite music style: jazz	**CATEGORY**	The value names a music style.

PART 2 · PROVE IT

Task: Choose one item of each type and explain your choices in 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)

- **QUANTITY**: Mass of a watermelon in kilograms: 3.2
- **CATEGORY**: Shoe color: black

Challenge: Remove the unit text and extra spaces from the cells, and label the column "Daily water use (liters)." The cleaned values are 2, 2.5, 3, and 1.5; the field is quantitative.

For Part 2, students should explain one item of each type. For example, item 3 is categorical because 17 identifies a route, while item 4 is quantitative because 12.4 measures rainfall.