

# Data Type Detectives

Sort data by what the values tell you.

**5.9** "Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data..."

NAME \_\_\_\_\_

DATE \_\_\_\_\_

## CATEGORICAL DATA

This data names groups, such as colors or kinds of objects. Use a bar graph or frequency table to show how often each label appears.

Kinds of clouds seen: cirrus, cumulus, cirrus, stratus

## NUMERICAL DATA

This data gives counts or measurements. Use a dot plot or stem-and-leaf plot to show the values.

Noon temperatures: 68, 70, 68, 72 degrees

## 1 SORT

8 items

For each data set, circle LABELS or NUMBERS, then choose two items and explain what told you which category to circle.

1. Beanbag toss scores: 8, 10, 7, 8

LABELS

NUMBERS

2. Fish lengths: 3.5, 4.0, 3.5, 4.25 in.

LABELS

NUMBERS

3. Fruit picked: apple, pear, apple, plum

LABELS

NUMBERS

4. Pages read: 12, 18, 12, 25

LABELS

NUMBERS

5. Ways students get home: walk, bus, car, bus

LABELS

NUMBERS

6. Team mascots: Tigers, Hawks, Tigers, Bears

LABELS

NUMBERS

7. Water in bottles: 0.6, 0.8, 0.6, 1.0 L

LABELS

NUMBERS

8. Minutes to finish a puzzle: 14, 11, 14, 16

LABELS

NUMBERS

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 LABELS data set and one new NUMBERS data set, with at least four values in each set.

LABELS

NUMBERS

CHALLENGE

Choose the best display for each data set: favorite lunch choices, pizza, tacos, pizza, salad; and jump distances, 4.2, 4.5, 4.5, 4.8 feet.

**PART 1 • SORT**

| # | ITEM                                        | CATEGORY       | WHY                                      |
|---|---------------------------------------------|----------------|------------------------------------------|
| 1 | Beanbag toss scores: 8, 10, 7, 8            | <b>NUMBERS</b> | The values are scores, which are counts. |
| 2 | Fish lengths: 3.5, 4.0, 3.5, 4.25 in.       | <b>NUMBERS</b> | The values are measurements of length.   |
| 3 | Fruit picked: apple, pear, apple, plum      | <b>LABELS</b>  | The values name kinds of fruit.          |
| 4 | Pages read: 12, 18, 12, 25                  | <b>NUMBERS</b> | The values are numbers of pages.         |
| 5 | Ways students get home: walk, bus, car, bus | <b>LABELS</b>  | The values name travel groups.           |
| 6 | Team mascots: Tigers, Hawks, Tigers, Bears  | <b>LABELS</b>  | The values are names of mascots.         |
| 7 | Water in bottles: 0.6, 0.8, 0.6, 1.0 L      | <b>NUMBERS</b> | The values are decimal measurements.     |
| 8 | Minutes to finish a puzzle: 14, 11, 14, 16  | <b>NUMBERS</b> | The values measure time in minutes.      |

**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)**

- **LABELS:** Bus ride choices: walk, bus, walk, car
- **NUMBERS:** Weights of oranges: 0.4, 0.5, 0.5, 0.6 pound

**Challenge:** Use a bar graph or frequency table for the lunch choices. Use a dot plot or stem-and-leaf plot for the jump distances.

Items 1, 2, 4, 7, and 8 are NUMBERS. Items 3, 5, and 6 are LABELS; accept reasonable student-created data sets that match each type.