Whose Data?

Sort distributions by the group they describe.

S.Q.2.3 "Recognize that a sample data distribution is taken from a population distribution, and the data distribution is what is seen in practice."

NAME _____ DATE _____

POPULATION DISTRIBUTION

This describes how a value varies across every member of a defined group. You may not have data from every member.

The distribution of diameters for all bolts made during a factory shift.

SAMPLE DATA DISTRIBUTION

This describes how a value varies in data actually collected from part of a defined group.

The distribution of diameters measured for 30 bolts selected from that factory shift.

1 SORT

8 items

Circle POPULATION or SAMPLE for each item, then choose two items, one from each category, and explain how you knew.

1.	Distribution of daily screen time for every student at North High.	POPULATION SAMPLE
2.	Distribution of checkout totals for every purchase at a grocery store on Friday.	POPULATION SAMPLE
3.	Distribution of heights measured for 40 selected players in a city basketball league.	POPULATION SAMPLE
4.	Distribution of morning arrival times for every bus on Route 8 in October.	POPULATION SAMPLE
5.	Distribution of pages read last month, reported by 25 selected public library members.	POPULATION SAMPLE
6.	Distribution of weekly work hours recorded for 60 selected hospital employees.	POPULATION SAMPLE
7.	Distribution of test scores recorded for 30 selected students in a district.	POPULATION SAMPLE
8.	Distribution of pet counts for every household in a neighborhood.	POPULATION SAMPLE

2 PROVE IT

Explain your thinking

Choose two items, one from each category, and explain how you knew.

ITEM # _____ **HOW I KNEW** _____

ITEM # _____ **HOW I KNEW** _____

3 MAKE YOUR OWN

One of each

Write one new example of a population distribution and one new example of a sample data distribution.

POPULATION _____

SAMPLE _____

CHALLENGE

For one question about people, describe both distributions, then state which one you could see if you collected data from just 20 people.

ANSWER KEY # Whose Data?

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Distribution of daily screen time for every student at North High.	**POPULATION**	It describes every student in the defined group.
2	Distribution of checkout totals for every purchase at a grocery store on Friday.	**POPULATION**	It describes every purchase in the defined group.
3	Distribution of heights measured for 40 selected players in a city basketball league.	**SAMPLE**	The measured values come from selected players, not the whole league.
4	Distribution of morning arrival times for every bus on Route 8 in October.	**POPULATION**	It describes every bus arrival in the defined group.
5	Distribution of pages read last month, reported by 25 selected public library members.	**SAMPLE**	The reported values come from selected members.
6	Distribution of weekly work hours recorded for 60 selected hospital employees.	**SAMPLE**	The recorded values come from selected employees.
7	Distribution of test scores recorded for 30 selected students in a district.	**SAMPLE**	The recorded scores come from selected students.
8	Distribution of pet counts for every household in a neighborhood.	**POPULATION**	It describes every household in the defined group.

PART 2 · PROVE IT

Task: Choose two items, one from each category, and explain how you knew.
Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 · MAKE YOUR OWN (SAMPLE ANSWERS)

- **POPULATION**: The distribution of shoe sizes for every student on the varsity tennis team.
- **SAMPLE**: The distribution of shoe sizes recorded for 8 selected students on the varsity tennis team.

Challenge: For a question about nightly sleep, the population distribution describes sleep hours for every student at East High. The sample data distribution describes sleep hours reported by 20 selected East High students. From those 20 responses, I could see the sample data distribution.

Items 1, 2, 4, and 8 describe population distributions. Items 3, 5, 6, and 7 describe distributions of data collected from samples.