

# STATISTICS

## A STATING THE PROBLEM

### Definition Population

A **population** is the whole group of people or things with something in common that we want to study.

**Ex:** The population is all the students in a college.

### Definition Data

**Data** is the information we collect, like numbers, words, measurements, or observations.

### Definition Types of Variables

- **Qualitative Variable (Categorical):** Describes categories or groups that cannot be measured numerically.
- **Quantitative Variable (Numerical):** Represents measurable quantities with numerical values.

### Definition Frequency and Relative Frequency

**Frequency** is how many times each value or category appears.

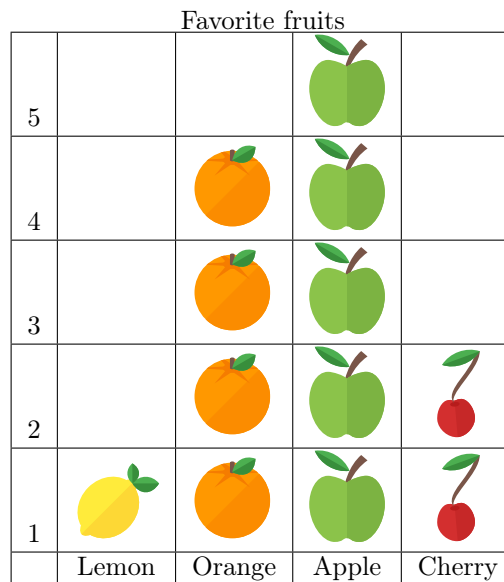
**Relative Frequency** is the frequency divided by the total, often shown as a percentage.

## B REPRESENTING DATA

### Definition Pictograph

A **pictograph** uses pictures or symbols to show data.

**Ex:**

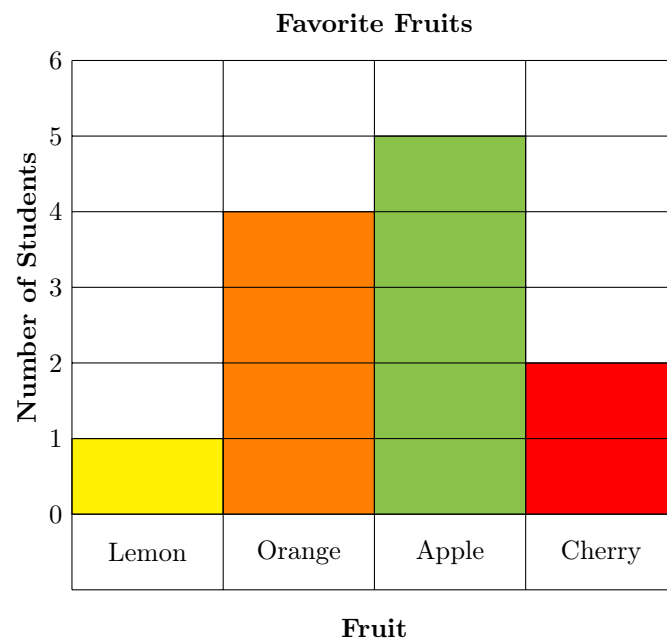


- Lemon: 1 student.
- Orange: 4 students.
- Apple: 5 students.
- Cherry: 2 students.

### Definition Bar Chart

A **bar chart** shows data with bars.

**Ex:**



- Lemon: 1 student.
- Orange: 4 students.
- Apple: 5 students.
- Cherry: 2 students.