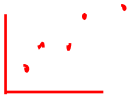


**Directed Reading B *continued***

**PATTERNS SHOWN BY GRAPHS**

**Match the correct description with the correct term. Write the letter in the space provided.**



trend

**18.** the pattern of data on a graph

**a.** nonlinear graph



linear graph

**19.** a graph in which the relationship between the independent variable and dependent variable can be shown with a straight line

**b.** linear graph

**c.** inverse

**d.** direct



nonlinear graph

**20.** a graph in which the relationship between variables cannot be shown with a straight line

**e.** trend



direct

**21.** a relationship in which the dependent variable increases as the independent variable increases



inverse

**22.** a relationship in which one variable increases while the other variable decreases

**23.** How are computers helpful to scientists?

1. a spreadsheet software, like Excel, can store the data in tables and create graphs, and calculate the statistical value of the data.

2. computers can also communicate the results via the internet.

Skills Worksheet

# Directed Reading B

## Section: Analyzing Your Data (pp. 56–61)

### WHY MATHEMATICS?

- a. 1. Which of the following is NOT something that scientists use mathematics for?
- a. learning how to speak a foreign language
  - b. seeing patterns in data to make predictions
  - c. answering questions
  - d. understanding and summarizing large amounts of data

2. How does a meteorologist use mathematics?

A meteorologist will calculate the percent chance of rain based on cloud density and wind movement data.

3. Why is mathematics often called the “language of science”?

Scientists communicate their data and results through data charts, graphs, and statistical analysis.

### ACCURACY OF DATA

4. Name three reasons why scientists might get an inaccurate reading when conducting an experiment.

- 1. the tool was broken
- 2. the wrong tool was used
- 3. human error - the tool was used incorrectly

### REPRODUCIBILITY OF DATA

- b. 5. Results of an experiment can be supported or accepted by other scientists if the data
- a. are not reproducible.
  - b. are reproducible.
  - c. cannot be converted into SI units.
  - d. are supported only by the French Academy of Sciences.