Chapter Review

The Nature of Science

Part A. Vocabulary Review

Directions: *Complete the following sentences using the terms listed below.*

model	mass	graph	hypothesis
standard	dependent variable	independent variable	
technology	theory	control	volume
constant	experiment	scientific law	society

_____ **1.** The factor in an experiment that is changed by the experimenter is the _____.

_____ **2.** A visual display of information or data is a(n) _____.

_____ **3.** An idea, event, or object is represented by a(n) _____.

_____ **4.** A test of a hypothesis is a(n) _____.

_____ **5.** A standard for comparison that is used in an experiment is a(n) _____.

_____ **6.** A rule of nature that tells you what will happen under certain conditions is a(n) _____.

_____ **7.** The independent variable in an experiment may cause a change in the _____.

_____ **8.** The amount of space occupied by an object is called its _____.

_____ **9.** A testable prediction is a(n) _____.

_____ **10.** Another term for applied science is _____.

_____ **11.** A variable that doesn't change in an experiment is called a _____.

_____ **12.** An explanation based on many observations supported by experimental results is a(n) _____.

_____ **13.** An exact quantity that people agree to use for comparison is a(n) _____.

_____ **14.** A measurement of the quantity of matter is _____.

_____ **15.** A group of people that share similar values and beliefs form a _____.

Chapter Review (continued)

Part B. Concept Review

Directions: *John counted the number of leaves that fell from a tree for a five-day period. John used a graph to show his data. Use John's graph to answer questions 1–6.*

1. What type of graph did John use to display

his data? _____

2. What is the dependent variable in John's

graph? _____

3. What is the independent variable in John's

graph? _____

4. On which day of the week did the greatest

number of leaves fall? _____

5. On what days of the week did the number
of leaves that fell remain constant?

_____

Graph Plotted by John

Days of the week

6. On what other type of graph could this data be shown? _____
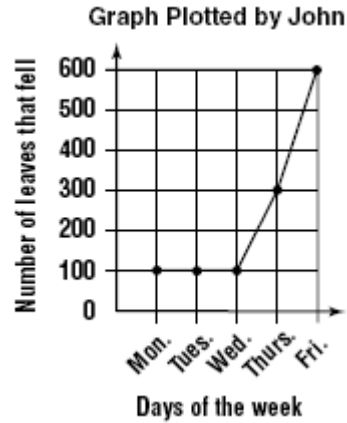
Directions: *Convert the following.*

  7. 200 m = _____ km

  8. 1.2 L = _____ mL

  9. 10.7 Kg = _____ g

10. 12 cm = _____ m

11. 10335mm = _____ Km

12. 315 L = _____ dm

13. 124 mm = _____ cm

14. 12,000 mg = _____ g

Directions: *Answer the following questions on the lines provided.*

15. How have moral and ethical issues influenced science?

_____

_____

16. How does the value of technology differ between developing countries and industrialized
countries?

_____

_____

17. How do social forces shape technology?

_____

_____

Interpreting Graphs

1. Mr. M's class grades were graphed as a pie graph. Based on this graph:

a) The largest percentage of students received what grade? _____

b) The smallest percentage of students received what grade? _____

c) Estimate what percentage of the class received a B. _____

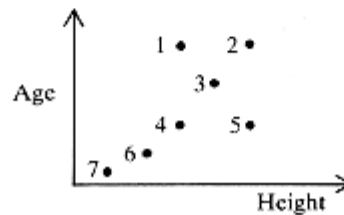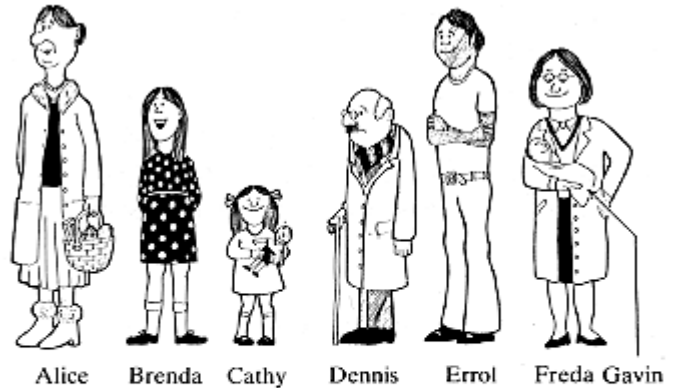d) Based on the graph, do you think Mr. M's class is hard?

   Why or why not? _____
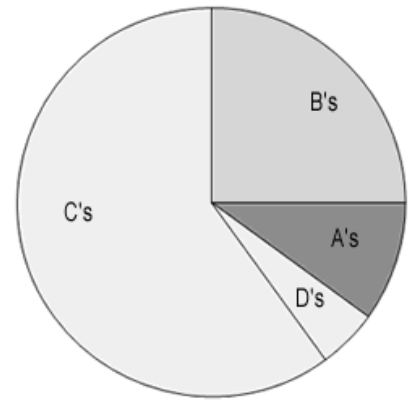
2. The scatter plot shows a bus stop where those waiting at the bus are plotted by their height and by their age. Identify which dot goes with which passenger.

1) _____

2) _____

3) _____

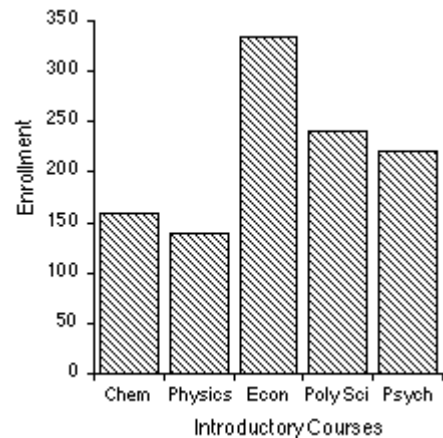4) _____

5) _____

6) _____

7) _____

1. The Bus Stop Queue

Who is represented by each point on the scattergraph, below?

Alice   Brenda   Cathy   Dennis   Errol   Freda Gavin

3. The bar graph compares the number of students enrolled in classes.

a) What class has the lowest enrollment?

_____

b) How many students are enrolled in Chemistry (chem.) _____

c) How many are enrolled in Psychology (Psych)? _____

4. This line graph compares the growth of plants that were kept in the sun for different amounts of time.

Day plant measured
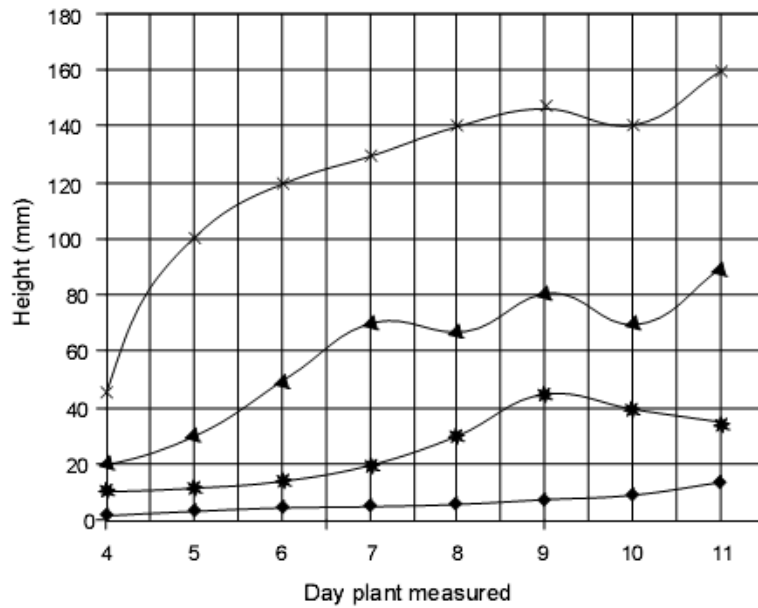
Key:
- 9 hours sunlight
- 6 hours sunlight
- 3 hours sunlight
- 1 hour sunlight

a) On Day 7, the plants kept in the sun for 3 hours were how tall? _____

b) On Day 7, the plants kept in the sun for 6 hours were how tall? _____

c) On Day 10, the plants kept in the sun for 9 hours were how tall? _____

d) On Day 10, the plants kept in the sun for 6 hours were how tall? _____

e) Based on the graph, the plant grows best in what amount of sunlight? _____

5. The line graph shows the number of worms collected and their lengths.

a) What length of worm is most common?
_____

b) What was the longest worm found?
_____

c) How many worms were 6 cm long?
_____

d) How many worms were 7.25 cm long?
_____

e) The peak of the curve represents the
[longest worms / average worms]

Length of worm (cm)