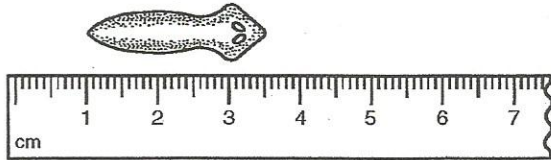


Name: \_\_\_\_\_

1. A biologist formulates a hypothesis, performs experiments to test his hypothesis, makes careful observations, and keeps accurate records of his findings. In order to complete this process, the biologist should
  - A) adjust the data to support the hypothesis
  - B) evaluate the findings and, if necessary, alter the hypothesis based on his findings, and test the new hypothesis
  - C) eliminate data that do not support the hypothesis
  - D) write a research paper explaining his theories before performing his experiments, in order to gain funding sources
- 2) The temporary storage of energy in ATP molecules is part of which process?
  - A) protein synthesis
  - B) cell division
  - C) DNA replication
  - D) cellular respiration
- 3) The diagram below represents the measurement of a biological specimen.



What is the approximate length of the specimen in millimeters?

- |          |          |
|----------|----------|
| A) 40 mm | C) 35 mm |
| B) 25 mm | D) 30 mm |
- 4) When using a compound light microscope, the *most* common reason for staining a specimen being observed is to
    - A) keep the organism from moving around
    - B) determine the effects of chemicals on the organism
    - C) make the view more colorful
    - D) reveal details that are otherwise not easily seen
  - 5) One characteristic of *all* living things is that they
    - A) maintain internal stability
    - B) synthesize only inorganic matter
    - C) develop organ systems
    - D) produce identical offspring

- 6) The ability to grow in size is a characteristic of living organisms. Although an icicle may grow in size over time, it is considered nonliving because there is
  - A) no way for the icicle to move away from heat
  - B) no metabolic activity present
  - C) an increase in matter, but no increase in the number of icicles
  - D) an interaction between the icicle and the environment
- 7) A wet-mount slide preparation of a specimen is stained in order to
  - A) eliminate some organelles
  - B) remove water from the slide
  - C) make cell structures more visible
  - D) use the high-power lens
- 8) A company that manufactures a popular multivitamin wanted to determine whether their multivitamin had any side effects. For its initial study, the company chose 2,000 individuals to take one of their multivitamin tablets per day for one year. Scientists from the company surveyed the participants to determine whether they had experienced any side effects. The *greatest* problem with this procedure is that
  - A) no control group was used
  - B) only one brand of vitamin was tested
  - C) the sample size was not large enough
  - D) the study lasted only one year
- 9) Why is a mushroom considered a heterotroph?
  - A) It divides by mitosis.
  - B) It manufactures its own food.
  - C) It obtains nutrients from its environment.
  - D) It transforms light energy into chemical energy.
- 10) A coverslip should be slowly lowered from a 45° angle onto a slide in order to
  - A) prevent the slide from being scratched
  - B) reduce the formation of air bubbles
  - C) stop the loss of water from under the coverslip
  - D) ensure that the specimen being viewed will stay alive

Name: \_\_\_\_\_

Homework # 1.7

Base your answers to questions 45 through 47 on the data table below and on your knowledge of biology. The data table shows the concentration of estrogen in picograms per milliliter (pg/mL) in the blood of a woman over the course of 28 days.

**Estrogen Concentration in Blood**

Day	Concentration of Estrogen (pg/mL)
1	30
5	80
10	200
15	180
20	30
28	25

*Directions (45–46):* Using the information given in the data table, construct a line graph on the grid following the directions below.

45 Mark an appropriate scale, without any breaks, on the axis labeled "Concentration of Estrogen." [1]

46 Plot the data for concentration of estrogen on the grid. Surround each point with a small circle and connect the points. [1]

Example: 

**Estrogen Concentration in Blood**

