

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

Date: \_\_\_\_\_

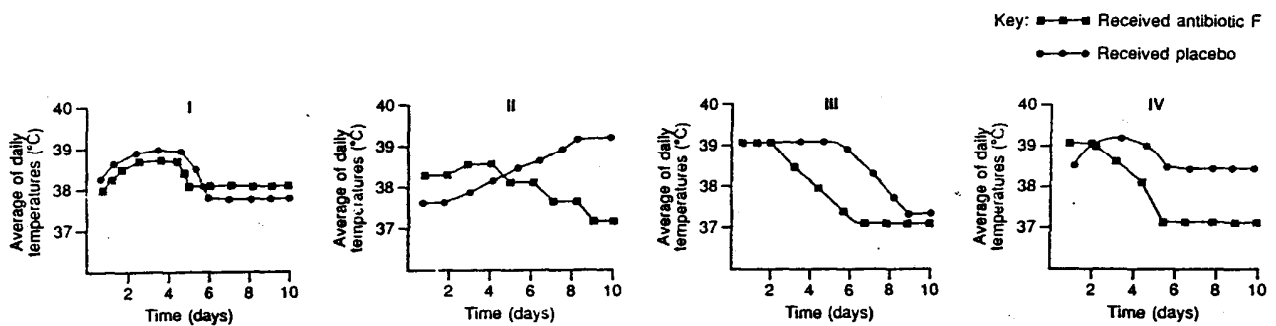
Period: \_\_\_\_\_

**BioSkills: Scientific Method Ws**

A scientist wished to determine if a new type of antibiotic, called antibiotic F, was effective against a particular type of microorganism that caused pneumonia. To test the hypothesis, the scientist found 100 volunteers in a large hospital, all suffering from the same type of pneumonia. The scientist gave 50 of the volunteers the new antibiotic for 10 days. The other 50 volunteers were given a sugar pill for 10 days. The sugar pill is called a placebo.

The scientist measured the effectiveness of the antibiotic by measuring each volunteer's temperature. Higher than normal body temperature indicated the presence of the disease-causing microorganisms. When a volunteer's temperature remained normal (37°C) for three days, he or she was considered free of the disease-causing microorganism.

1. What was the scientist's hypothesis? \_\_\_\_\_  
\_\_\_\_\_
2. Identify the control group. \_\_\_\_\_
3. Identify the experimental group. \_\_\_\_\_



4. Which graph indicates that the antibiotic was not effective against the disease-causing microorganism? Explain your answer. \_\_\_\_\_  
\_\_\_\_\_
5. Which graph supports the scientist's original hypothesis? Explain your answer. \_\_\_\_\_  
\_\_\_\_\_
6. Can you think of any other observations or comparisons the scientist might have made in this experiment? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. Why do you think the scientist gave 50 of the volunteers a placebo? \_\_\_\_\_  
\_\_\_\_\_