



Problem

How will your heart rate be affected by exercise?

Hypothesis

1. Estimate your heart rate at rest and after 50 jumping jacks. _____
2. Do you think your heart rate will increase or decrease after running for one minute?

3. If I exercise, my heart rate will _____ compared to my resting heart rate.

Experimental Design

1. Independent Variable: _____
2. Dependent Variable: _____
3. Number of Trials: _____
4. Two Constants: _____

Data Collection

1. After the person finishes each exercise, record the values in the table below using the graph on the TI-73. BPM is the beats per minute of the heart.

Time (seconds)	At Rest (BPM)	Jumping Jacks (BPM)	Running in Place (BPM)	Jumping Rope (BPM)
30				
60				
90				
120				
Individual's Average				

2. Sketch the bar graph of individual mean heart rates for each exercise and at rest. Label each bar and the axes. You may also print the graph on the computer and attach it to this page.





3. Use the results from the other lab groups in your class to find the average number of beats per minute for each exercise. Record the averages in the table below.

Activity	Class Average (BPM)
At Rest	
Jumping Jacks	
Running in Place	
Jumping Rope	

Data Analysis

Using the data from the tables and graph, answer the following questions.

1. What general trend did you notice for each type of exercise?

2. What is your individual BPM range for each type of exercise?

Jumping Jacks _____

Running in Place _____

Jumping Rope _____

3. Do the heart rate readings make sense for each type of exercise? Explain your answer.

4. What is the difference between the mean BPM after each type of exercise and the person's resting rate?

Conclusion

If I exercise, my pulse rate _____ by an average of _____ BPM in the three activities compared to my resting rate.