

I. As a class, define the following types of statistical measurement:

1. MEAN—

2. MEDIAN—

3. MODE—

II. Answer the following questions:

4. Suppose you are working in a clothing store and have to order new clothes. You have a record of the sizes of different jackets sold during the last season. If you are interested in reordering new jackets, what measure of “center” would be the greatest use to you?

5. Suppose you are figuring the class average and a very low score is pulling the class mean down. What measure of “center” would be the greatest use to you?

III. As a class, construct a histogram.

Your science class is measuring the length (in centimeters) of the leaves of swamp ferns for a project. The following measurements were recorded. Construct a histogram of the measurements.

10.5	12.5	8.5	7.0	11.5	7.0	11.0
11.0	13.5	15.5	7.2	8.3	12.5	12.0
8.2	6.5	13.5	9.5	12.8	13.2	8.7



IV. Time To Exercise!

Record your pulse rate after each activity:

- A. Resting\_\_\_\_\_                      B. Talking\_\_\_\_\_
- C. Walking in Place\_\_\_\_\_              D. High Energy Activity\_\_\_\_\_

V. Collect Your Data!

Walk around the room and collect data from 20 other people.

Student Name	Resting	High Energy	Student Name	Resting	High Energy

VI. Analyze Your Data

- Write down the resting pulse rates in order from smallest to largest.
- Find the mean, median, and mode (if it exist) for these points.

MEAN\_\_\_\_\_              MEDIAN\_\_\_\_\_              MODE\_\_\_\_\_

- Write down the high energy pulse rates in order from smallest to largest.
- Find the mean, median, and mode (if it exist) for these points.

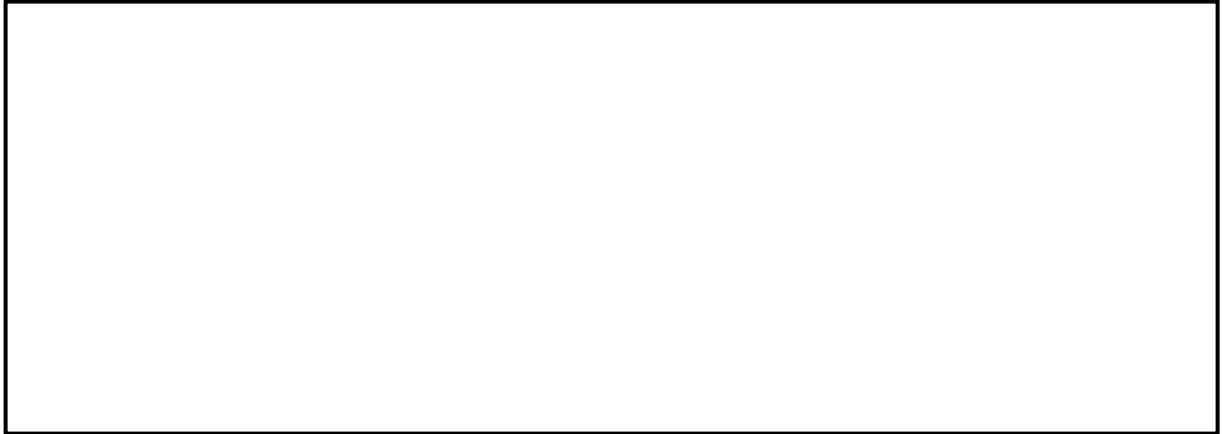
MEAN\_\_\_\_\_              MEDIAN\_\_\_\_\_              MODE\_\_\_\_\_

5. Did you notice a difference between the resting and the high-energy mean, median, and mode? Do you think that it would have been different using the talking measurements rather than the high-energy measurements? Why?

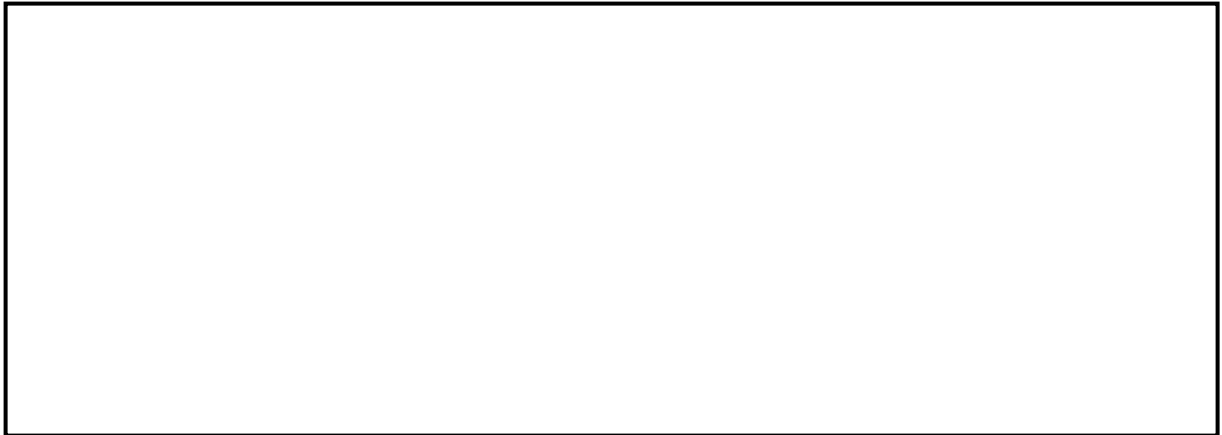
## VII. Construct a Histogram

Construct a histogram for each of the activities. Decide as a class how wide the class widths should be on the histogram. Use good chart skills such as using a title, even scales on the axis, and being very neat!

### RESTING PULSE RATE HISTOGRAM



### HIGH ENERGY PULSE RATE HISTOGRAM



What measure would be best for describing this data: MEAN, MEDIAN, or MODE?

Compare the two histograms and write a paragraph describing their similarities and differences.

## Optional Grading Rubric For *Exercise Those Statistics*

Grading Scale	Criteria
EXCELLENT 4	<ul style="list-style-type: none"> <li>-Awesome group participation</li> <li>-All answers completed</li> <li>-Completed detailed graph with appropriate titles and scales</li> <li>-Great summary paragraph with clear concise sentences showing complete understanding.</li> </ul>
GOOD 3	<ul style="list-style-type: none"> <li>-Good group participation</li> <li>-90% of answers completed</li> <li>-Good graph</li> <li>-Good summary paragraph with complete sentences.</li> </ul>
SATISFACTORY 2	<ul style="list-style-type: none"> <li>-Adequate group participation</li> <li>-80% of answers completed</li> <li>-Good graph but missing scale and/or labels</li> <li>-Summary paragraph contains incomplete sentences or thoughts.</li> </ul>
NOT YET 1	<ul style="list-style-type: none"> <li>-Unsatisfactory group participation</li> <li>-70% or less of answers completed</li> <li>-Poor graph</li> <li>-Summary paragraph is poorly written with no grasp of understanding or thought process.</li> </ul>