

DO NOT TURN THIS PAGE UNTIL YOU ARE INSTRUCTED TO DO SO

- ❖ Write your name below on the space provided.
- ❖ This test has a total of 6 pages.
- ❖ Work the problem in the space provided. If you need more space, write on the back of the test.
- ❖ To insure maximum credit, show your work. In general, full credit will not be given for unsupported answers.
- ❖ Look only at your test. Don't give me the impression that you are cheating.
- ❖ Be sure to write neatly. If I cannot read what was written, do not expect the problem to be graded. A pencil must be used on all tests. Otherwise, the test will not be graded.
- ❖ If you finish early, go over the test again.

Good luck!

Number	Maximum	Score
1	16	
2	2	
3	3	
4	4	
5	6	
6	12	
7	6	
8*	10	
9*	4	
10*	12	
11*	25	
Total	100	

\*On Take Home Portion

Name \_\_\_\_\_

Circle Final Answers

1) Consider the data below which represents the number of public libraries in select states.

$\{53, 60, 84, 85, 97, 119, 128, 140, 230, 267, 296\}$

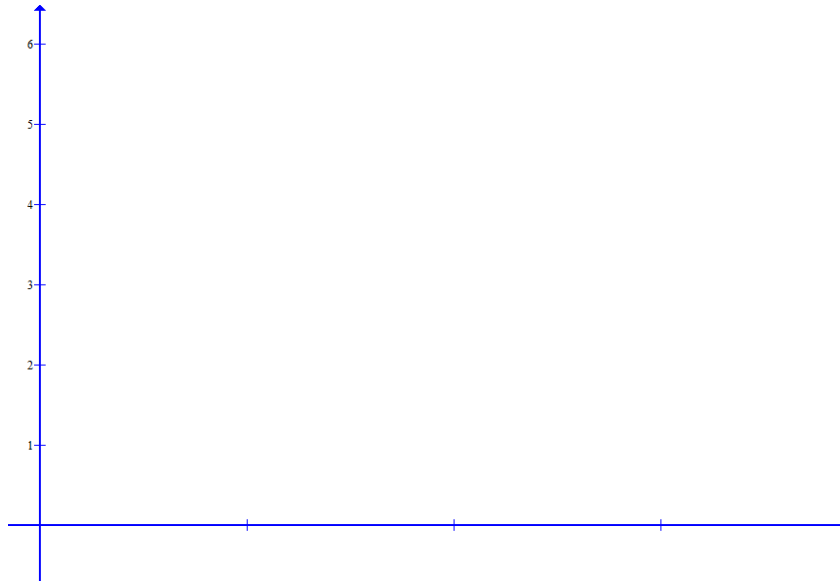
a) (3 points) Find the mean of the data:

b) (3 points) Find the median of the data:

c) (3 points) Find the mode of the data:

d) (3 points) Find the range of the data:

e) (4 points) Draw and label a histogram. Use the classes 0 – 99, 100 – 199, and 200 – 299:



2) (2 points) Short Answer: Explain how to find the median of the set of numbers:

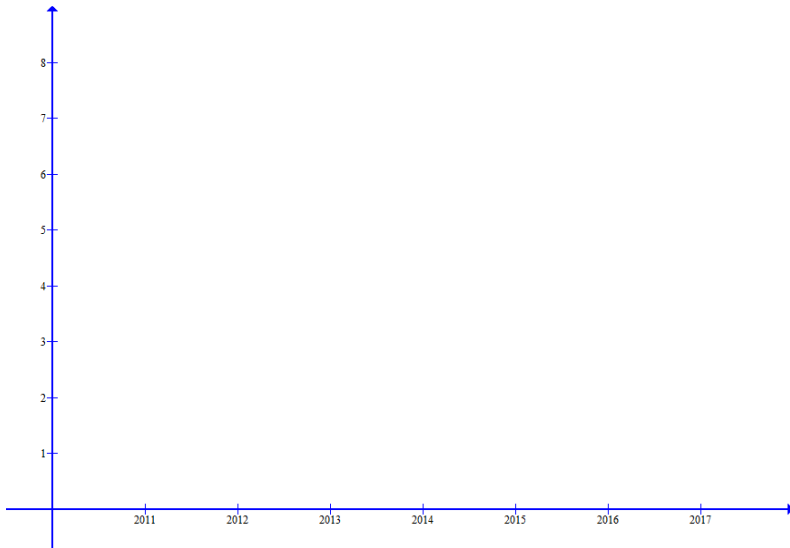
3) (3 points) Alice Student is taking 5 courses this semester:

*Running Underwater*—2 credit hours—Grade: A    *Quiet Tap Dance*—3 credit hour—Grade: C  
*Who Really Let the Dogs Out*—4 credit hours—Grade: B    *Tag*—2 credit hours—Grade: A  
*Defense Against the Dark Arts*—3 credit hours—Grade: A

Assuming that a grade of an ‘A’ is worth 4 point, grade of a ‘B’ is worth 3 points, and a grade of a ‘C’ is worth 2 points, determine Alice’s grade point average for the semester rounded to two decimal places:

4) (4 points) The following chart shows number of American super hero movies that arrived in a theater near you. Draw and label a frequency polygon for the data.

Year	Number of American Super Hero Films
2011	4
2012	3
2013	5
2014	8
2015	7
2016	8



5) (3 points each) Suppose there are 2,000 people at a concert and the ages of the people are normally distributed with a mean of 45 years and a standard deviation of 8 years.

a) What **percent** of people are younger than 37 years?

b) What **number** of people are older than 61 years?

6) (4 points each) The average lifespan of the You Light Up My Life light bulb is 34 years with a standard deviation of 6 years. Suppose a You Light Up My Life light bulb was randomly picked. What is the probability that it will work:

a) Less than 25 years?

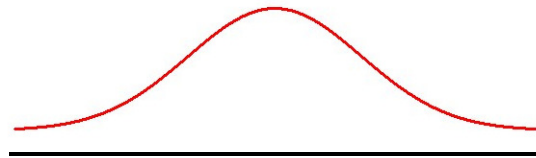
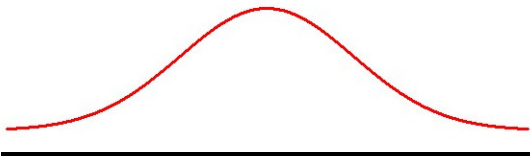
b) At least 39 years?

c) Less than 30 years or more than 40 years?

7) (2 points each) For each problem in 6 above, shade in the normal distribution curve. Be sure to label the  $x$ -axis with the appropriate numbers. Also, mark the mean on each graph:

a) Less than 25 years?

b) At least 39 years?



c) Less than 30 years or more than 40 years?

