Name: _____   Date: _____   Period: _____

Please do all work on a separate sheet of paper.

1. The chart below shows the result of a survey taken of one section of an arena at a concert.
    People were asked their ages as they were seated.

    (a) Construct a frequency histogram for the frequency table above.
    (b) What is the total number of people who were less than 16 years old?
    (c) What is the probability that a person chosen at random is older than 25?
    (d) What interval contains the median?

Age	Frequency
0 – 5	18
6 – 10	23
11 – 15	12
16 – 20	8
21 – 25	12
26 – 30	15
31 – 35	7
36 – 40	5

2. The cumulative frequency table to the right shows the distribution of scores on a math test.
    How many scores were greater than 90?

Interval	Cumulative Frequency
61 - 70	4
61 - 80	10
61 - 90	12
61 - 100	16

3. The frequency table to the right shows the distribution of
    weight, in pounds, of 32 students.

    (a) What interval contains the median?
    (b) What interval contains the lower quartile?
    (c) Construct the cumulative frequency table, using the
         data given in the frequency table.
    (d) Construct a cumulative frequency histogram using the
         table completed in part (c).

Weight	Frequency
160 - 179	9
140 - 159	8
120 - 139	6
100 - 119	2
80 - 99	7

Interval	Cumulative Frequency
80 - 179	
80 - 159	
80 - 139	
80 – 119	
80 - 99	

4. The frequency table to the right shows the ages of the first 40
    persons to enter a theater.

    (a) Complete the cumulative frequency table.
    (b) Using the table completed in part (a), construct a
         cumulative frequency histogram.
    (c) What is the probability that a person chosen at
         random will be less than 20 years old?
    (d) Does the interval 40 – 49 contain the age at the 80th
         percentile? [Explain your answer]

Age	Frequency
0 - 9	8
10 - 19	7
20 - 29	4
30 - 39	11
40 - 49	5
50 - 59	3
60 - 69	2

Interval	Cumulative Frequency
0 - 9	8
0 - 19	
0 - 29	
0 - 39	
0 - 49	
0 - 59	
0 - 69	

5. What measure is always the same as the 25th percentile?

6. In the table, what interval contains the upper quartile?

Interval	Frequency
91 - 100	3
81 - 90	5
71 - 80	4
61 - 70	5
51 - 60	3

7. Rosario and Enrique are in the same math class. On the first five tests, Rosario received scores of 78, 77, 64, 86, and 70. Enrique received scores of 90, 61, 79, 73, and 87. How much higher was Enrique's average than Rosario's average?

8. Jorge made the accompanying stem-and-leaf plot of the weights, in pounds, of each member of the wrestling team he was coaching.
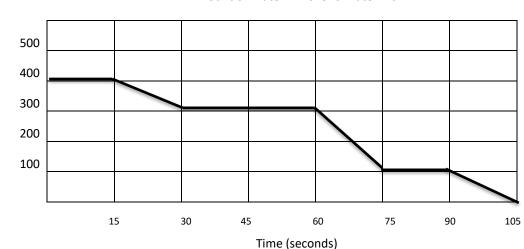
   What is the mode of the weights?

Stem	Leaf
10	9
11	
12	3 8
13	2 4 4 6 8
14	1 3 5 5 9
15	2 3 7 7 9
16	1 3 7 8 8 8 9
17	3 8

Key: 16 | 1 = 161

9. The accompanying graph shows the amount of water left in Rover's water dish over a period of time. How long did Rover wait from the end of his first drink to the start of his second drink of water?
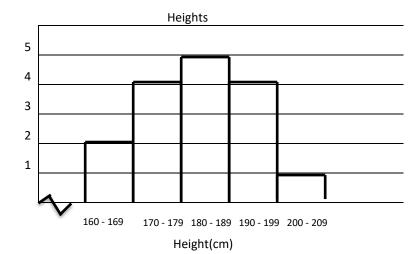
Amount of Water in Rover's Water Dish

10. The accompanying histogram shows the heights of the students in Kyra's health class. What is the total number of students in the class?

Heights

11. A set of data from an experiment is 36, 40, 40, 42, 44, 52, and 54. The mean of this set is:

    [a]   40   [b]   44   [c]   42   [d]   45

12. What is the mean if $4y + 3$ and $2y - 1$?

    [a] $y + 1$ [b] $3y + 2$ [c] $3y + 4$ [d] $3y + 1$

13. If the median for the following set is 50, what is the value of x? {20, 40, x, 52, 60, 63}

    [a]   48   [b]   49   [c]   51   [d]   50

14. The table represents the distribution of the ages of neighborhood children. What interval contains the median?

Ages	Frequency
16 - 18	5
13 - 15	8
10 - 12	4
7 - 9	6
4 – 6	2
1 - 3	5

    [a]   4 - 6   [b]   7 - 9   [c]   10 - 12   [d]   13 – 15

15. What is the mode for the following set of data?   19, 8, 38, 41, 8, 16, 3

    [a]   8   [b]   16   [c]   19.4   [d]   38

16. For the set of data 9, 9, 10, 11, and 16, which one of the following statements is true?

    [a]   median < mode   [b]   mean > median   [c]   mean = mode   [d]   mean < mode

17. In the set of scores 32, 40, 42, 52, 59, how many scores are less than the mean?

18. In five basketball games, a player scores the following points: 13, 21, 21, 21, and 24. What is the mean of the points scored?

19. The scores 12, 17, 15, and x have a mean of 13. What is the value of x?

20. The data 6, 12, x, and 7 have a mean of 10. Find the value of x.

21. Create a stem-and-leaf lot for the following numbers: 86, 94, 78, 74, 86, 86

22. The scores on a math test were 78, 83, 70, 84, 89, 67, 84, 78, 85, 77, 68, 80, 71, 78, 81, 75, 88, 90, 71, and 73. Construct a stem-and-leaf plot for these scores.

23. What measure is always the same as the 50th percentile?

    [a]   Lower quartile   [b]   mean   [c]   median   [d]   mode

24. In the table below, what interval contains the upper quartile?

Interval	Frequency
91 – 100	3
81 – 90	5
71 – 80	4
61- 70	5
51 - 60	3

    [a]   91 - 100   [b]   71 - 80   [c]   81 - 90   [d]   51 - 60