

**Honors Algebra 2**  
**Mean, Median, Mode, Box & Whiskers**

Name \_\_\_\_\_  
Hour \_\_\_\_\_

**Show your work.**

**1. A list of five test scores were: 60, 67, 73, 63 and 67. Find the following:**

- a) Mean
- b) Median
- c) Mode
- d) Range

**2. Seven people were asked how many miles they lived from work. The responses were: 15, 7, 14, 21, 5, 9 and 13. Find the following:**

- a) Mean
- b) Median
- c) Mode
- d) Range

**3. At a pet store, a survey was taken asking how many pets each person had. The results were: 2, 5, 3, 1, 0, 4, 2, 7, 0, 2, 7, 3. Find the following:**

- a) Mean
- b) Median
- c) Mode
- d) Range

**4. A sample of eight students were randomly selected and asked, "How many times did you check your email yesterday?" The numbers were: 3, 0, 8, 7, 10, 2, 6, 12. Find the following:**

- a) Mean
- b) Median
- c) Mode
- d) Range

5. A student had taken six tests and received scores of 88, 73, 81, 83, 79, 94.

a) The seventh test was coming up and the student wanted to know what he needed on the seventh test to have a mean score of 83. Find the seventh test score ( $x$ ).

b) Find the median and mode including the seventh test score from part a.

Median:

Mode:

6. Use the test scores to find the following:

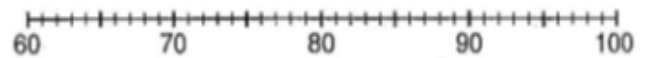
TEST SCORES						
82	86	89	84	78	82	92
95	77	69	98	95	63	73

a) the median

b) the lower quartile

c) the upper quartile

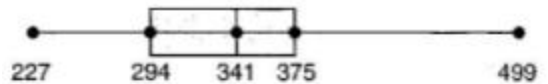
d) make a box and whisker



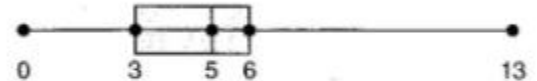
e) what percent of scores is between the upper and lower quartile?

7. Match each description with the most reasonable box and whisker plot.

a) season scores of a baseball team



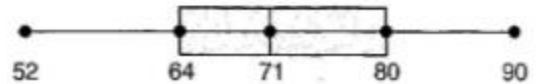
b) resting heart rate (beats per minute)



c) prices of a 25 inch TV(\$)



d) ages at a Boy Scout meeting



8. Test scores on a recent math test were: 81 79 80 88 88 90 100 56 70 68 67 64 90 88 85 81 60 78

1st quartile: \_\_\_\_\_

Median: \_\_\_\_\_

3rd quartile: \_\_\_\_\_

Minimum: \_\_\_\_\_

Maximum: \_\_\_\_\_

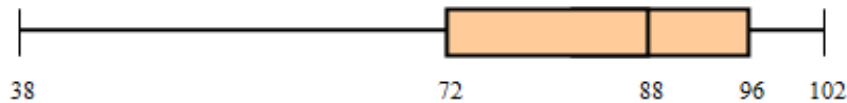
Make a box-and-whisker plot of the data set:

9. Suppose that one family kept track of how many DVDs they rented each month for a two year period. The numbers for each month are shown in the tables below.

J	F	M	A	M	J	J	A	S	O	N	D
3	5	2	8	1	5	0	3	6	4	9	15
J	F	M	A	M	J	J	A	S	O	N	D
3	6	4	1	10	3	8	7	2	9	0	11

Make a box & whisker graph from this data.

10. Refer to the box & whisker graphs below that shows the test results of a math class.



\_\_\_\_\_ a) What was the high score on the test?

\_\_\_\_\_ b) What percent of the class scored above a 72?

\_\_\_\_\_ c) What was the median score on the test?

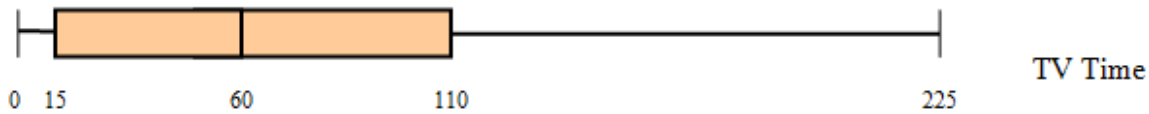
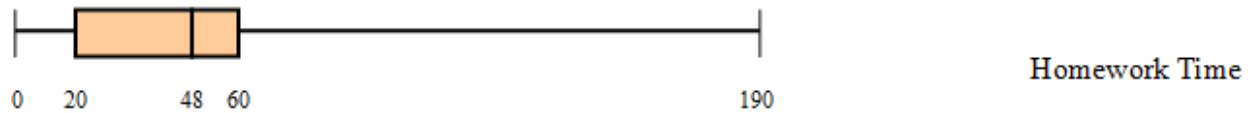
\_\_\_\_\_ d) What percent of the class scored between 88 & 96?

e) Would you expect the mean to be above or below the median? Explain.

f) Do you think that this test was too hard for the students? Give a thorough rationale.

Refer to the box & whisker plots below comparing homework time per night with TV time per night

### TV & Homework Minutes per Night



\_\_\_\_\_ 11. What percent of the sophomores watch TV for at least 15 minutes per night?

\_\_\_\_\_ 12. What is the 3<sup>rd</sup> quartile for the TV time data?

For questions 13 – 21, identify if each statement is true (T), false (F), or cannot be determined (CBD).

\_\_\_\_\_ 13. Some sophomores didn't watch TV that month.

\_\_\_\_\_ 14. The TV box & whisker graph contains more data than the homework graph.

\_\_\_\_\_ 15. 25% of the sophomores spend between 48 & 60 minutes per night on homework.

\_\_\_\_\_ 16. 15% of the sophomores didn't watch TV that month.

\_\_\_\_\_ 17. In general, these sophomores spend more time watching TV than doing homework.

\_\_\_\_\_ 18. The TV data is more varied than the homework data.

\_\_\_\_\_ 19. The ratio of sophomores who spend more than 110 minutes per night watching TV to those who spend less is about 2:1.

\_\_\_\_\_ 20. 225 sophomores watch TV

\_\_\_\_\_ 21. Twice as many sophomores watch TV for more than 1 hour than do homework for more than 1 hour.

22. Is it more common for a sophomore at this high school to spend more than 1 hour on homework or more than 1 hour watching TV? Explain.