

Alg 1 Week 14 Fri Warm Up

1. Skill 18: Multiply and Divide Rational Expressions

Simplify the polynomial completely.

$$\frac{r^2 - 1}{2r^2 + r} \cdot \frac{4r^3 + 2r^2}{r^2 - 4r + 3}$$

2. What are the mean, median, and mode of the numbers of cars washed at a car wash over the past 12 days? Which measure of central tendency best describes the data? (pg 744 A)

Number of Cars

42	71	55	21
67	86	36	45
44	50	52	67

3. Lucinda has quiz scores of 18,15,14,16, & 15 this quarter. What score must she earn on her next quiz to have an average score of 16 for the quarter?

4. Simplify completely;

a. $\sqrt{2}(4 - 2\sqrt{6})$

b. $(2\sqrt{5} + 3)(4 - \sqrt{2})$

c. $\sqrt{\frac{12}{20}}$

Solve & check

d. $\sqrt{2x - 3} = \sqrt{3x + 6}$

Today We will be learning about and creating Box and Whisker Plots. This is skill 20.

Box and Whisker Plots are a way to visually display data.

First you will need to know some math words (vocabulary)

Median:

1st Quartile:

3rd Quartile:

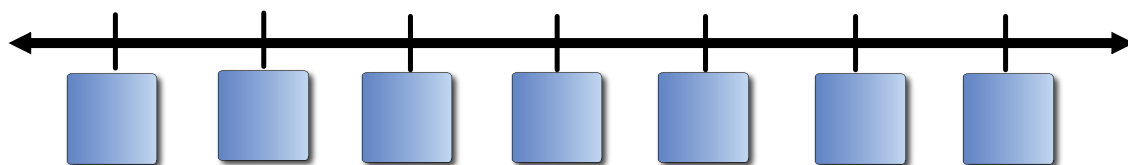
Maximum:

Minimum:

Example 1:

2, 3, 5, 6, 8, 9, 12, 12, 13

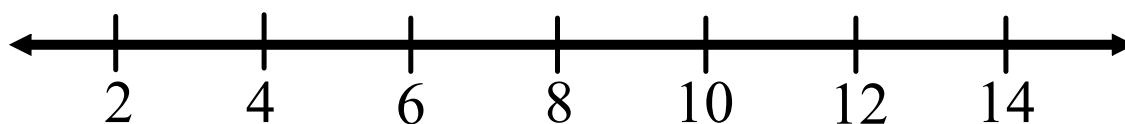
- First, be sure your data is arranged from to
- Now you are ready to construct the actual box & whisker graph. You will need to draw an ordinary number line that extends far enough in both directions to include all the numbers in your data.



Find the **median** of the entire set.

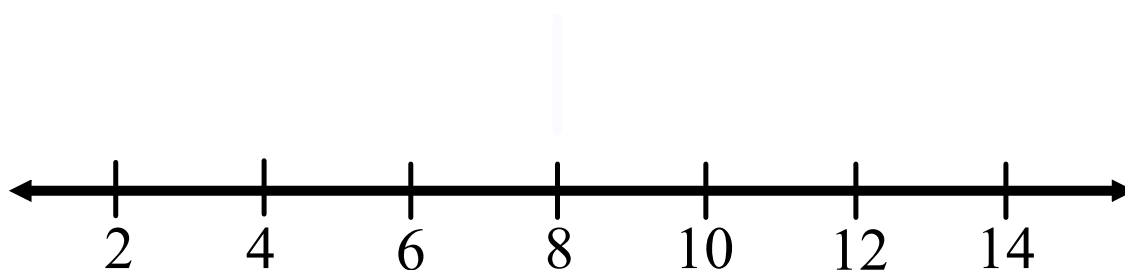
2, 3, 5, 6, 8, 9, 12, 12, 13

Median
of entire set

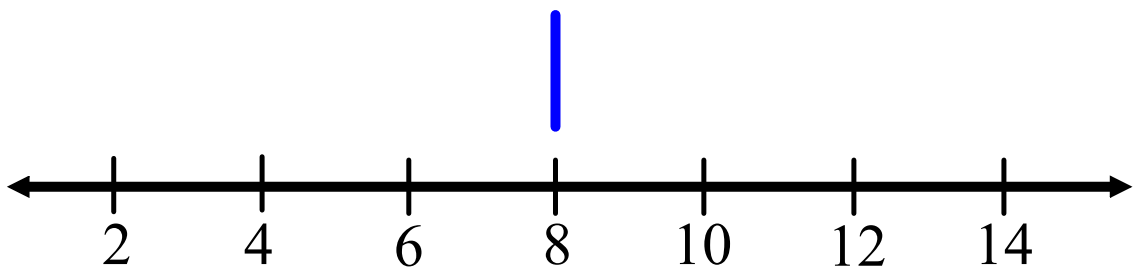
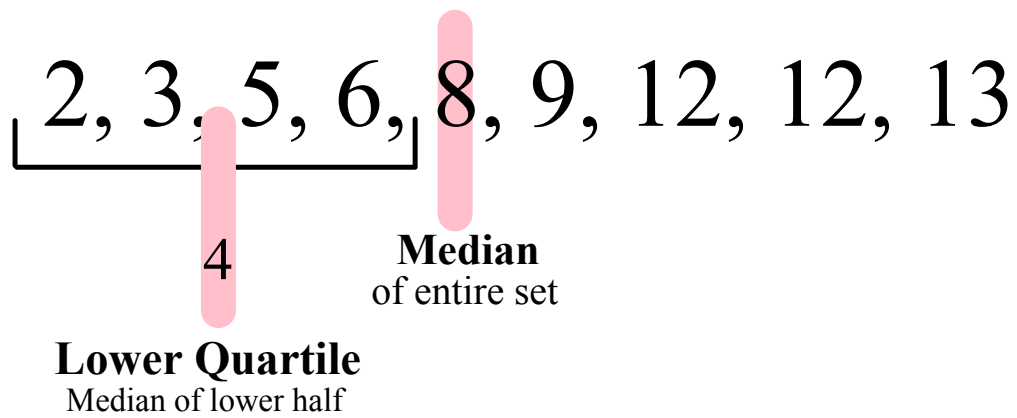


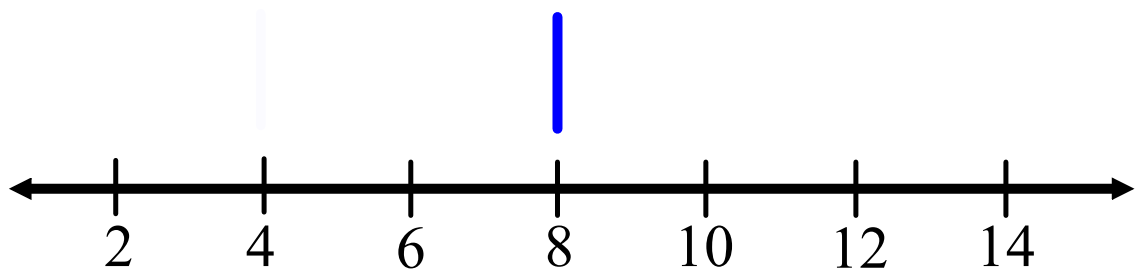
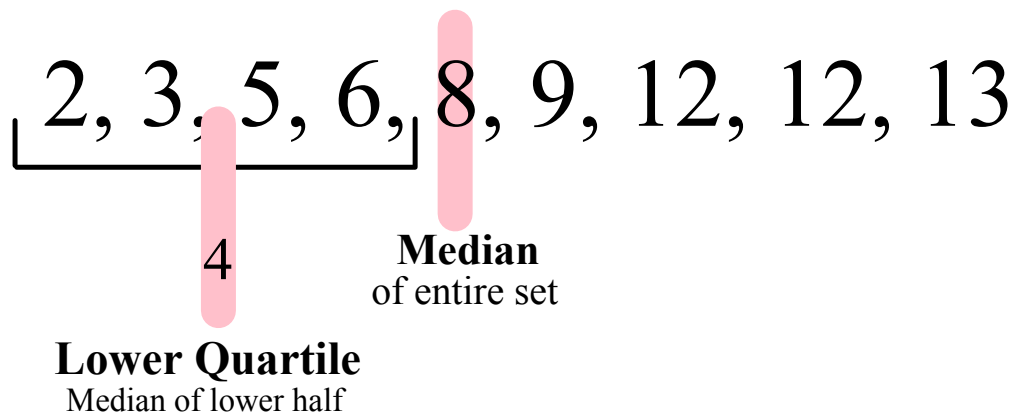
2, 3, 5, 6, 8, 9, 12, 12, 13

Median
of entire set

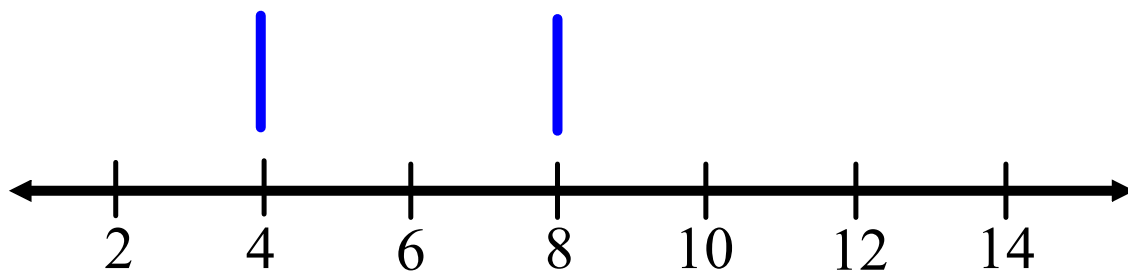
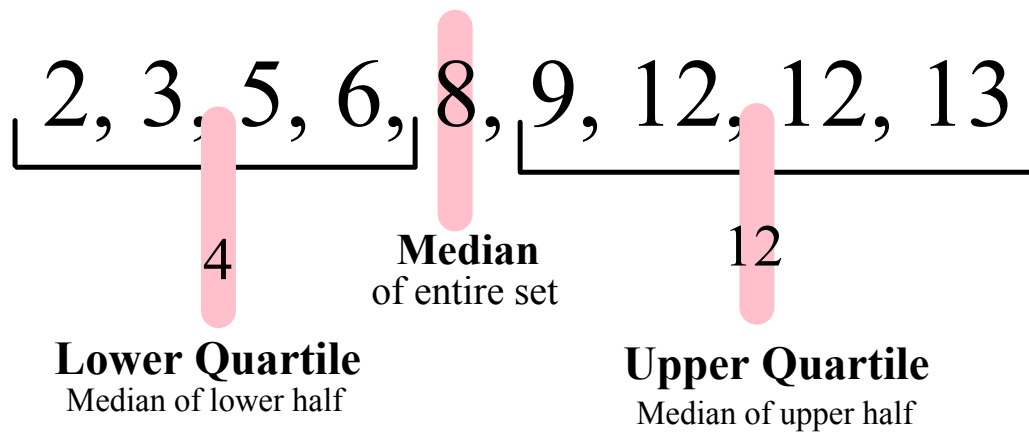


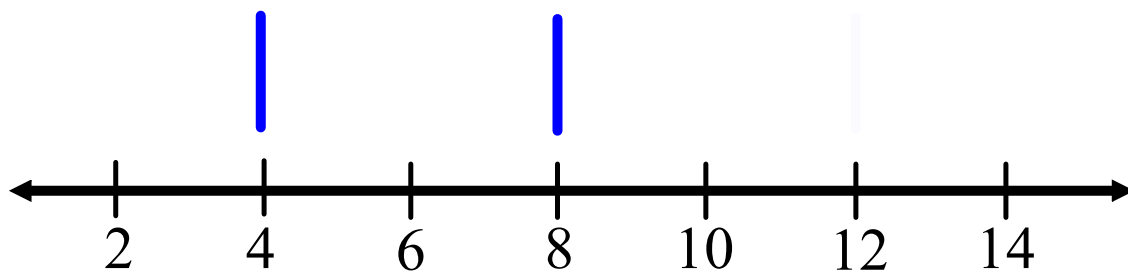
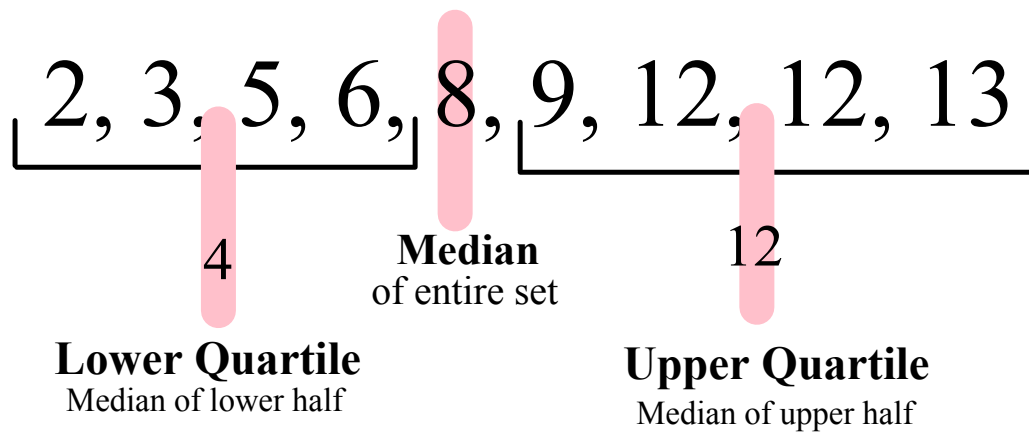
Find the **median** of the **lower half**.
This is the **1st Quartile**

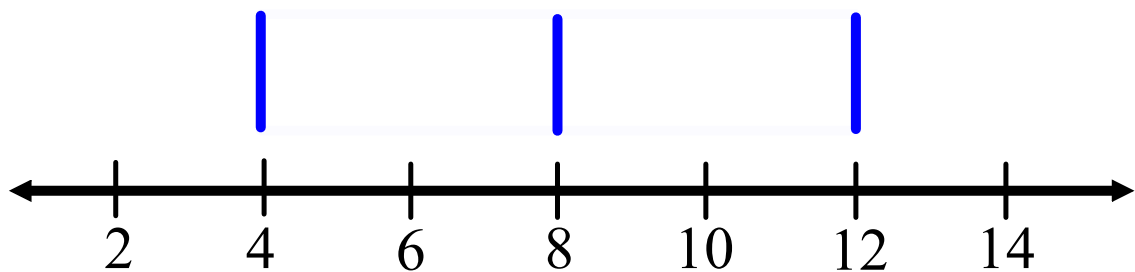
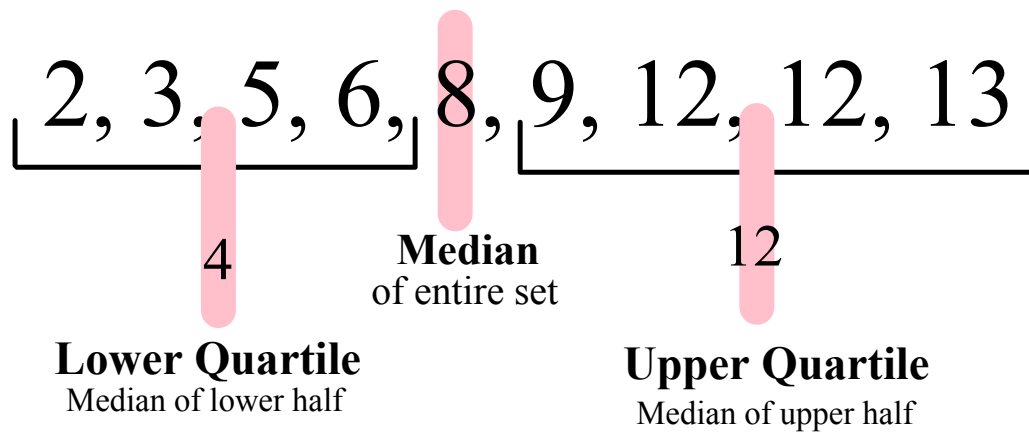




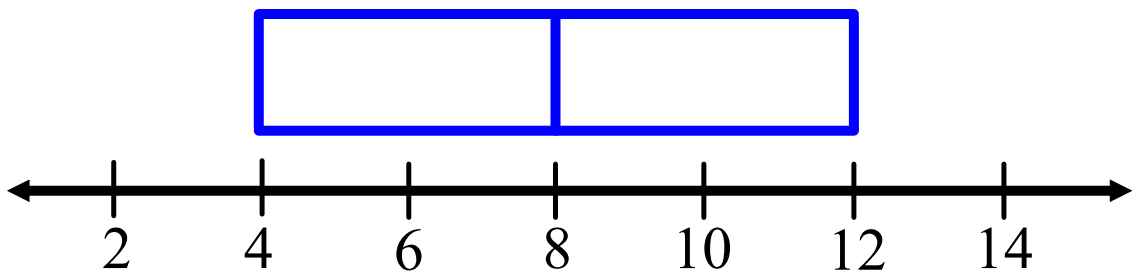
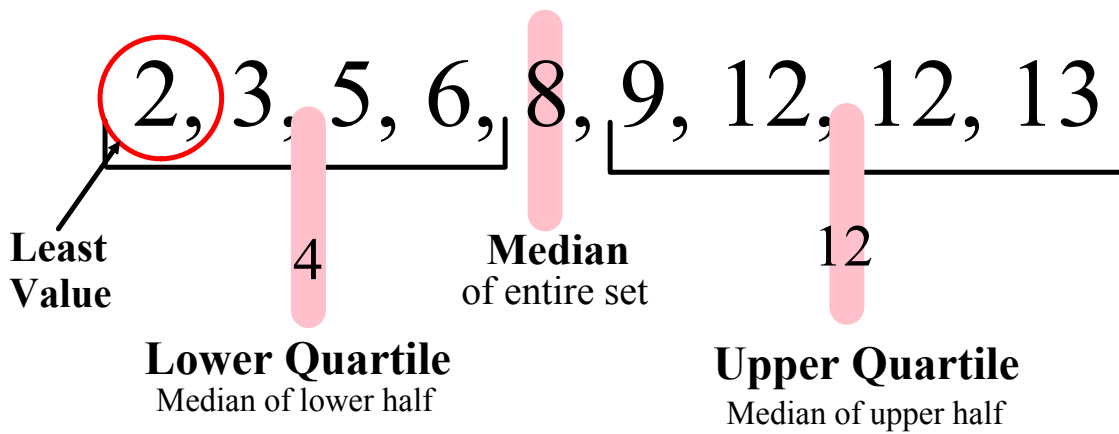
Find the **median** of the **upper half**.
This is the **3rd Quartile**.

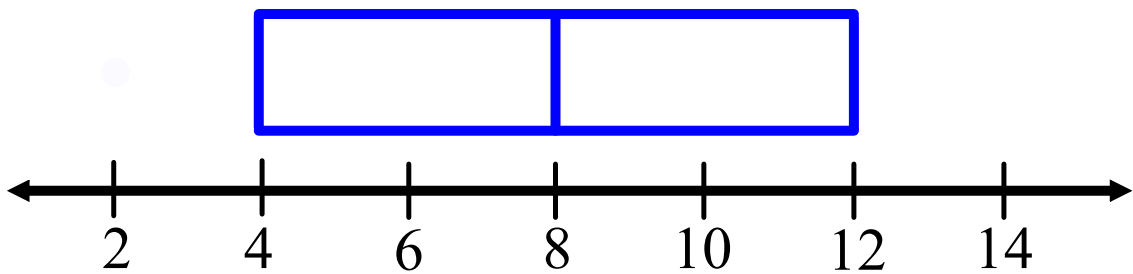
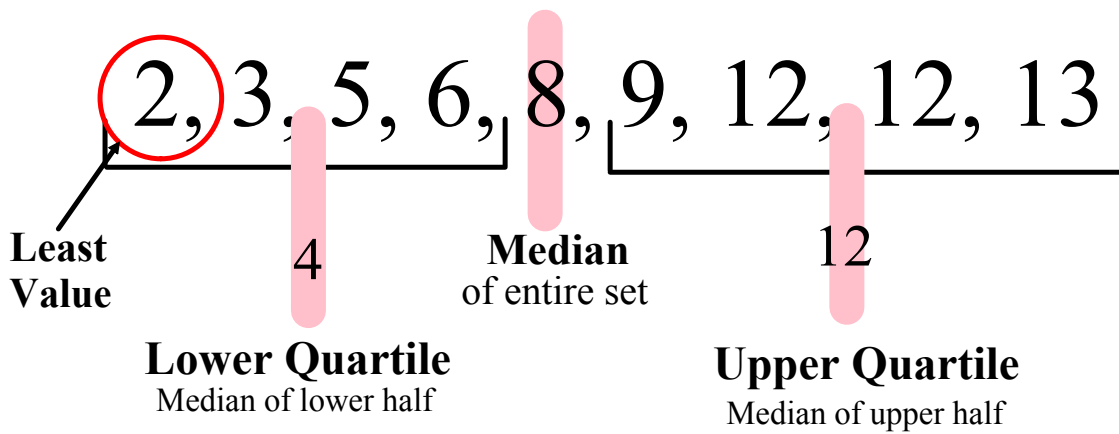


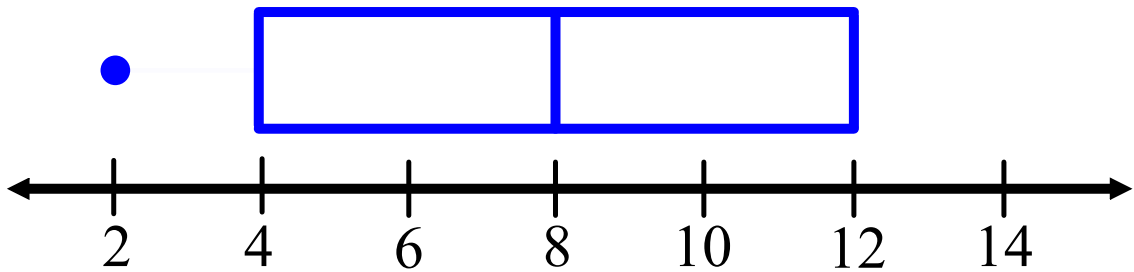
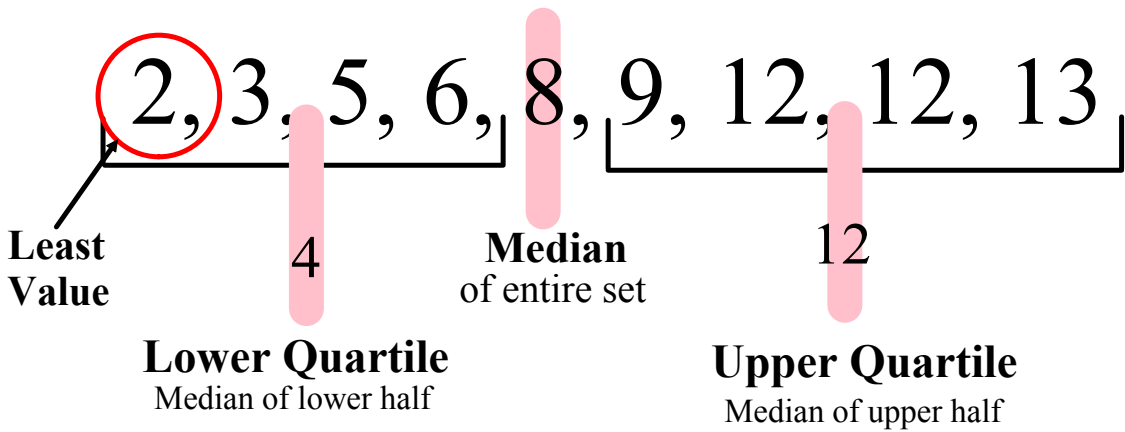


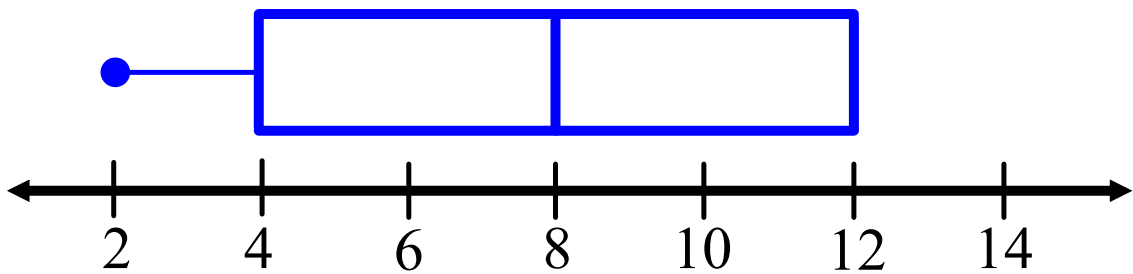
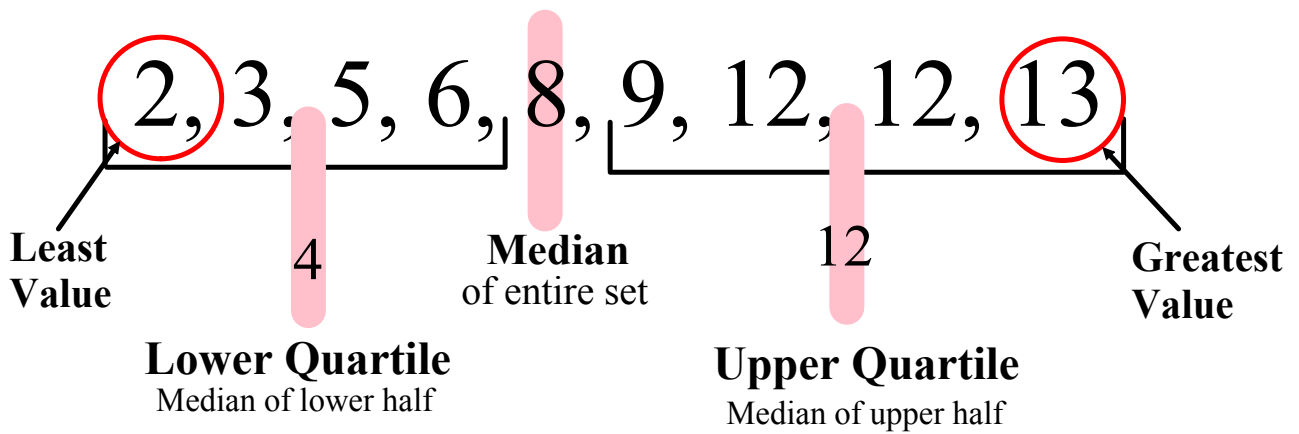


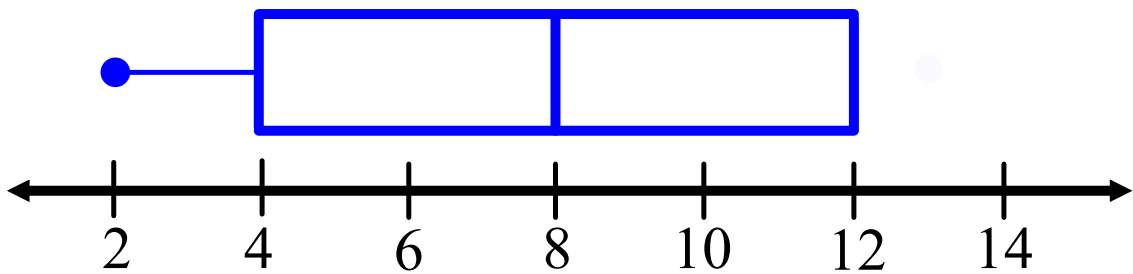
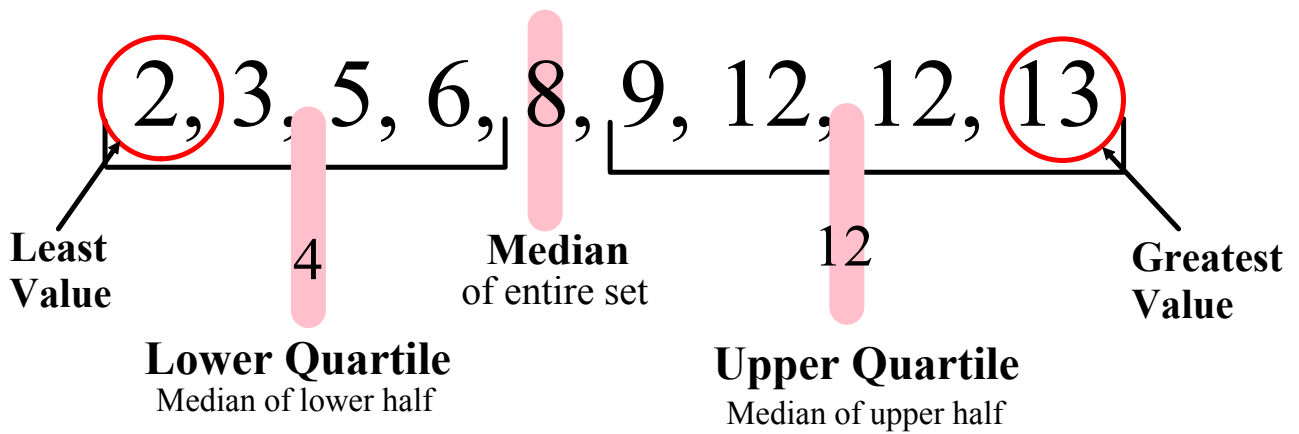
The whiskers are the
Minimum and maximum numbers.

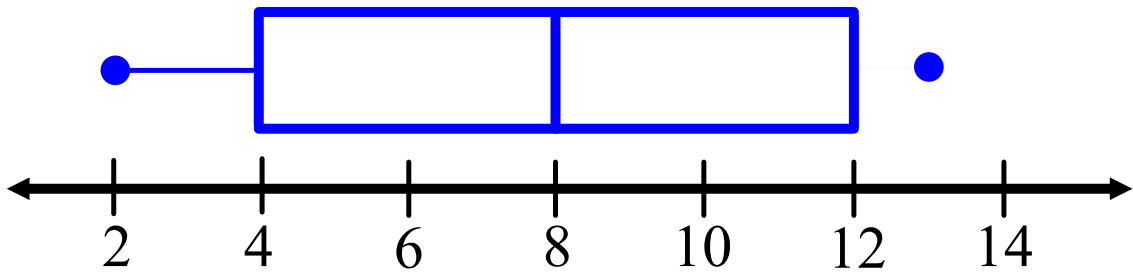
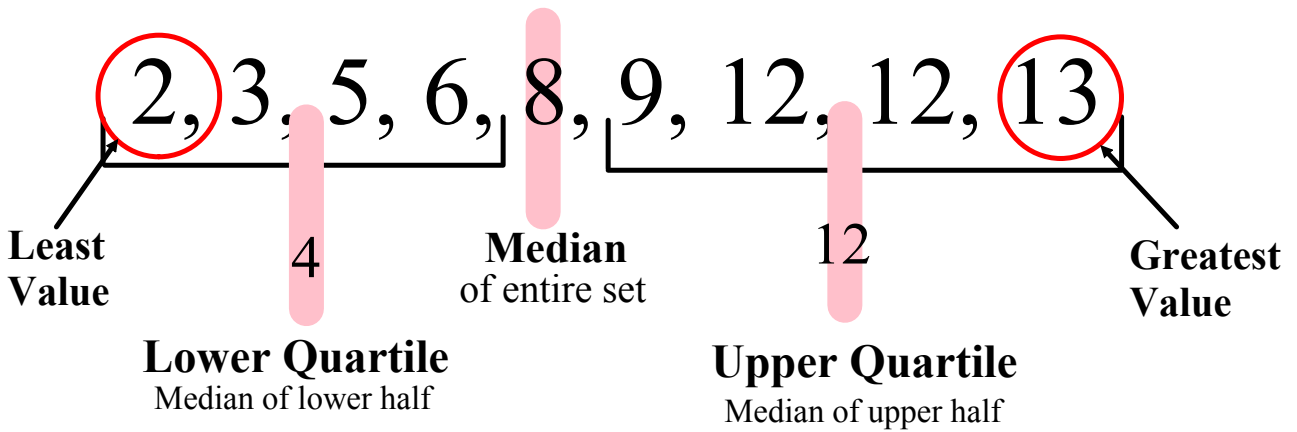












Label Activity

The diagram shows a box and whisker plot on a horizontal axis with 11 tick marks. A light blue box is drawn above the axis, with a vertical line inside representing the median. Whiskers extend from the box to the left and right ends of the axis, ending in arrows. Five empty white boxes are provided for labeling: two above the plot and three below. Lines connect these boxes to the corresponding parts of the plot: the top-left box to the left whisker end, the top-right box to the right whisker end, the bottom-left box to the left whisker end, the bottom-middle box to the median line, and the bottom-right box to the right whisker end.

Least Value Lower Quartile

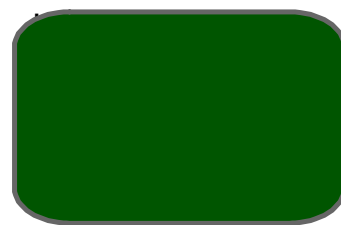
Median Upper Quartile Greatest Value



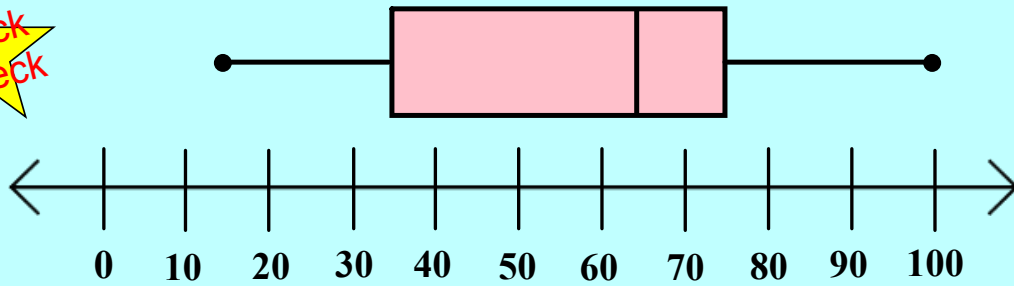
Let's Try these

Draw and label a Box and Whisker Plot for each. hint:

1. 5, 8, 9, 12, 13, 14, 14, 16, 20



2. 72, 65, 88, 90, 79, 85, 72, 75



1. What is the median of the data represented in the graph?
a) 35 b) 75 c) 65 d) 55
2. What is the Upper Quartile?
a) 65 b) 70 c) 85 d) 75
3. What is the minimum value according to this graph?
a) 13 b) 35 c) 17 d) 100

Time for Week 14 assessments:

Radicals Quiz Re-take

Skill 19.1

When you finish, work quietly on the homework.



Homework:

12.4 Vocabulary Support WS/all

p750: 8,11,13

and 12-3 Vocab &
Puzzle

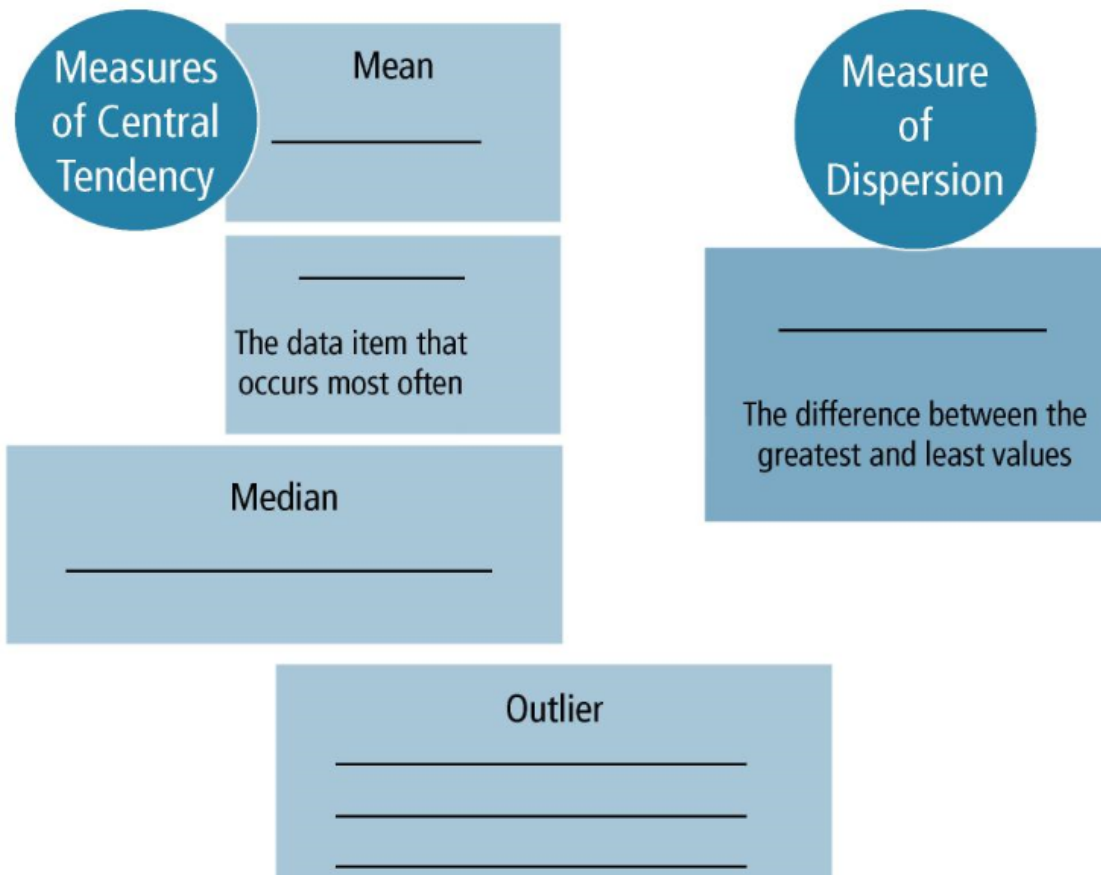
Name Friday Week 14 Class _____ Date _____

12-3 Additional Vocabulary Support

Measures of Central Tendency and Dispersion

Use the list below to complete the diagram.

A data value that is much greater or much less than the other values in the set	Mode	Range
	The average	The middle of a set of ordered data



Find the mean, median, mode, outlier, and range of the data set 4, 4, 4, 7, 7, 8, 22.

1. Mean _____
2. Median _____ possible
3. Mode _____
4. Outlier _____
5. Range _____

CW/HW

Name _____ Class _____ Date _____

12-3 **Puzzle: One Mean Puzzle** Measures of Central Tendency and Dispersion

Match the solutions to the problems below. Write the letters of your answers in the blank spaces toward the bottom of the page. Your answers will spell out the names of the two mathematicians who are credited with the founding of probability theory.

Use the following data sets.

Data Set 1: 7, 11, 5, 9, 7, 19, 8, 13, 2

Data Set 2: 84, 78, 66, 93, 68, 72, 96, 88, 96, 89

- | | |
|------------------------------|--------------|
| 1. the mean of Data Set 1 | A. 7 |
| 2. the median of Data Set 1 | C. 86 |
| 3. the mode of Data Set 1 | E. 96 |
| 4. the maximum of Data Set 1 | F. 30 |
| 5. the range of Data Set 1 | L. 8 |
| 6. the mean of Data Set 2 | M. 83 |
| 7. the median of Data Set 2 | P. 19 |
| 8. the mode of Data Set 2 | R. 9 |
| 9. the minimum of Data Set 2 | S. 17 |
| 10. the range of Data Set 2 | T. 66 |

and

_____ and _____
 4 3 5 7 3 2 10 8 1 6 3 9

Algebra 1 Wk15 Monday HW

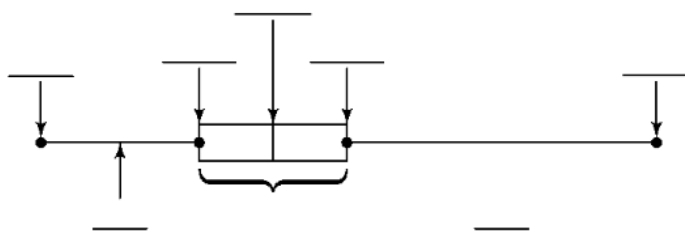
Name _____ Class _____ Date _____

12-4 Vocabulary Support

Box-and-Whisker Plots

Use the list below to complete the diagram.

- | | | |
|---------------------|-------------------|--------------------|
| interquartile range | maximum | median |
| minimum | Q1/first quartile | Q2/second quartile |
| Q3/third quartile | whisker | |



Fill in the blanks. Use words or phrases from the box above to help you.

- The length of the _____ indicates the size of the interquartile range.
- The right whisker extends from the third quartile to the _____
- A _____ represents 25% of the data.
- The _____ separates the data into upper and lower halves.
- The _____ is the median of the lower half of the data.
- The _____ is the median of the upper half of the data.
- The _____ is the difference between the third and first quartiles.
- The left whisker extends from the _____ to the first quartile.

Pg 750:

Find the minimum, first quartile, median, third quartile, and maximum of each data set.

8. 12 10 11 7 9 10 5

11. 101 100 100 105 101 102 104

Make a box-and-whisker plot to represent each set of data.

13. movie ratings: 1 5 1 2.5 3 2 3.5 2 3 1.5 4 2 4 1 3 4.5