**BOX PLOT (aka Box-and-Whisker Plot) NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 DATE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_

42 22 31 27 24 38 35

DATA SET 1:

***STEPS TO CREATING A BOX PLOT:***

*STEP 1:* Order the data from least to greatest.

*STEP 2*: Draw and label a number line for the data set.

*STEP 3*: Find the least value (also called the **lower extreme** or minimum). Place a dot above this value on the number line.

*STEP 4*: Find the greatest value (also called the **upper extreme** or maximum). Place a dot above this value on the number line.

*STEP 5*: Find the median. Place a dot above this value line on the number line.

\*SPECIAL NOTE: The median separates the data into a lower half and an upper half.

*STEP* 6: Find the **lower quartile** (also known as the first quartile).

Place a dot above the number line at this value.

Lower quartile = the median of the lower half of the data

*STEP* 7: Find the **upper quartile** (also known as the third quartile).

Place a dot above the number line at this value.

Upper quartile = the median of the upper half of the data.

*STEP 8*: Draw a box from the lower quartile to the upper quartile. Draw a vertical line through the median to split box.

*STEP 9*: Inside the box draw a vertical line through the median.

*STEP 10*: Draw the “whiskers” from the box to the least and greatest values.



20 22 24 26 28 30 32 34 36 38 40 42

Interquartile Range is the range of the middle portion of the data.

Interquartile Range = upper quartile (3rd) - lower quartile (1st )

DATA SET 2:

73 67 75 81 67 75 85 69



 64 66 68 70 72 74 76 78 80 82 84 86

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DATA SET 3: 19, 46, 37, 16, 24, 47, 23, 19, 31, 25, 42

Construct a box plot for the data set above and answer the questions. Show any work below the questions.



 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52

1. What value is the minimum? \_\_\_\_\_
2. What does 19 represent in the box plot? \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_
3. What is median for this data set? \_\_\_\_\_
4. What does 42 represent in the box plot? \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_
5. What value is the maximum? \_\_\_\_\_
6. What is the interquartile range of the data? \_\_\_\_\_