

Box and Whisker Plots

Step-by-Step Instructions

Recommended: Use these instructions in conjunction with:

1. the textbook, page 613.
2. the handout from class, page 2.

Step 1: A. List the data in order from least to greatest.

B. Find the median (*remember, if there are two middle numbers, you might have to add them and divide by 2*).

Step 2: Find the upper and lower quartiles. (*Note: if the median, from step 1B, is a single number, then don't include it in either of the upper or lower quartiles. However, if the median comes from two numbers, you need to include each number with its correct quartile.*)

- A. Find the median of the lower half of data values. That median is the **lower quartile**.
- B. Find the median of the upper half of data values. That median is the **upper quartile**.

Step 3: A. Draw a number line.

1. Use the least and greatest data values for the beginning and end.
2. Space the numbers in a way that makes sense: every 5, or every 10 or...

B. Put below the number line: (*see examples of other box-and-whisker plots to see how they are below the number line*)

1. The least and greatest values.
2. The median.
3. The quartiles.

C. Draw a box from the lower quartile to the upper quartile.

D. Draw a vertical line through the median to cut the box into two parts. (The median is the "middle" quartile.)

E. Draw whiskers from the least and greatest values to the box.

1. From the least value to the box.
2. From the greatest value to the box.

To be sure that you are correct, make sure you have the following things:

1. Number line,
2. Five points,
3. One box, split in two parts,
4. Two whiskers.