Location

$y \to \{90, 80, 70, 12\}$
$z \to \{90, 80, 70, 60\}$
$S_y \approx 34.9667$
$S_z \approx 12.9099$

Median

The median of a bunch of numbers is obtained by first putting the numbers in ascending order, and picking the one in the middle.

Quartiles

- 3 quartiles
- Should be evenly distributed between quartiles
- Second quartile (Q_2) is the same as the median
- If there are an odd number of numbers (5, 7) the location of the second quartile can be thought of as a circle around the middle number if the numbers are in ascending order.
- If there are an even number of numbers, the location of the second quartile … a circle around the two middle numbers.
- The first quartile is the median of the numbers to the left of the location of the second number if the numbers

$Q_1 = \{1, 2, 5\}, Q_2 = \{6, 9, 10\}$ if your numbers are $\{1, 2, 5, 6, 9, 10\}$

Inter-quartile range for $Q_1 = \{1, 2, 5\}, M = \{6\}, Q_3 = \{6, 9, 10\}, IQR = 9 - 2 = 7$

Five-number summary

Consists of the following numbers in order:

$$\text{Lowest number} Q_1, Q_2, Q_3 \text{highest number}$$

Box plot

Make an L shaped chart. Ends of the rectangle are on median from Q_1 and Q_2, middle line is on the median, and the ends are on the lowest/highest numbers

Homework:

3.81a,b