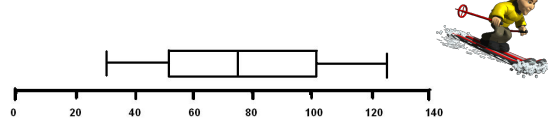


# Box Plots

Box Plot - a.k.a **Box and Whisker Plot**  
 A graph that presents information from a **five** number summary

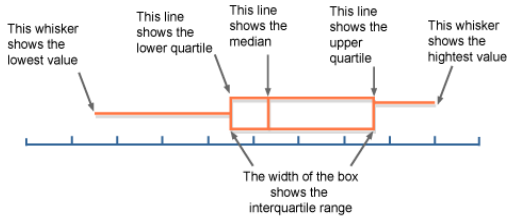
Box plots help to:  
 Determine any **outliers** in the data set.  
 Compare two or more data sets.

Annual snow depth at Mathsville Ski Resort



## Box Plot's 5 Number Summary

- Lower Extreme
- Lower Quartile
- Median
- Upper Quartile
- Upper Extreme



What is a Quartile?

Values that divide your data into quarters

- Q1- Lower Quartile
- Q2- Median
- Q3- Upper Quartile

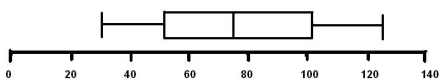
How do we find each quartile?

- Q1- Median of lower half of data
- Q3- Median of upper half of data

Quartiles separate the original set of data into 4 sections

Each Quartile represents 25 percent of the data set, which is 1/4 as a fraction

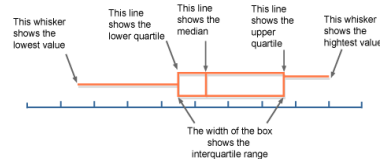
Annual snow depth at Mathsville Ski Resort

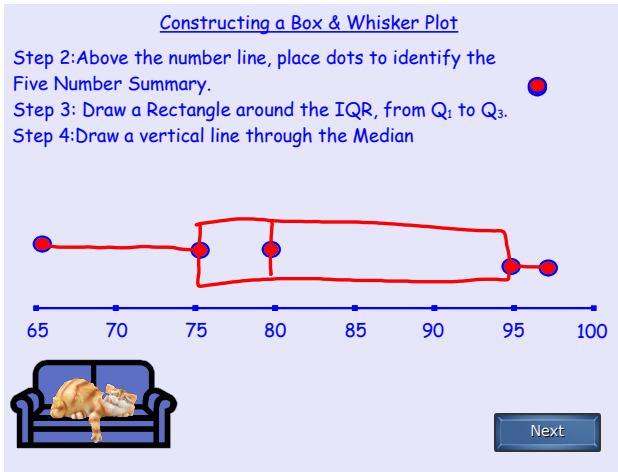
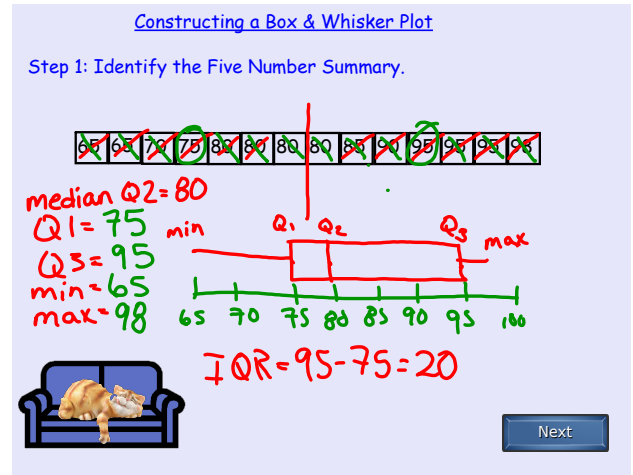
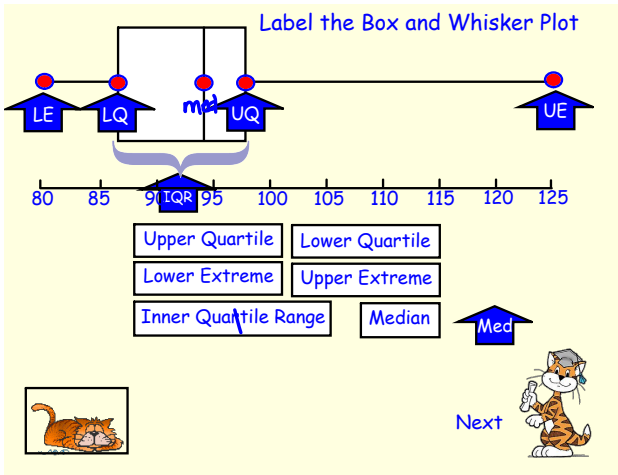


What is the Inter-Quartile Range (IQR)?

The IQR is the difference between the Q<sub>1</sub> and Q<sub>3</sub>.  
 It is useful because it represents 50 percent of the data, which is 1/2 as a fraction.

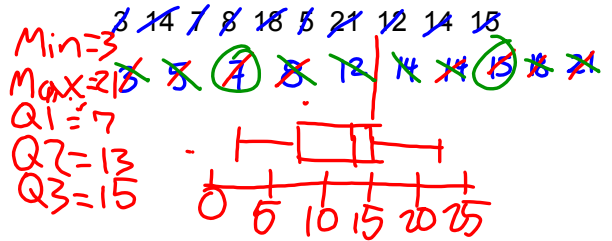
The IQR spans the box.





Try on your own:

Create a box and whisker plot to represent the data below:



Box Plots on a CALC

Clear your calc 2nd 0 7 1 2

List - Enter your data into the list. Hit enter after each number

2nd Mode

2nd List

CALC

1-Var Stats. Hit ENTER twice

Scroll down. There's your 5 # summary!

