

## Measuring Spread

**Goal: Develop methods for measuring the variability (the spread) in data.**

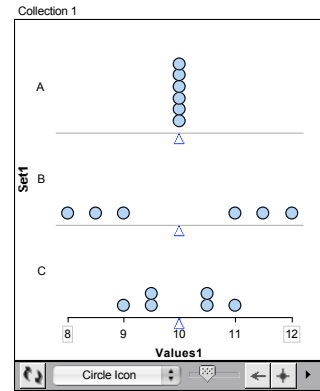
1. Use the dotplots at the right.

- a. Each of these distributions has a mean of 10, but each distribution has a different amount of spread. Based on looks, order the distributions from *least amount of variability* to *most amount of variability*.

Order \_\_\_\_\_

**Least spread ..... Most spread**

It may help to fill in the table of data values.



- b. Devise a way to measure the variability in a distribution.

Here are the specs:

- Use the data in your measurement.
- Your measurement gives a single number that represents the spread in the data.
- Your measurement ranks the distributions appropriately (smallest measurement corresponds to distribution with least spread, etc.)

Data set A	Data set B	Data set C

*Explain or show how your measurement works:*

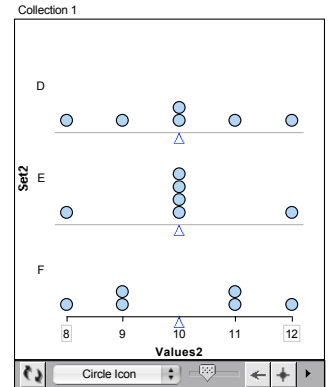
2. Here we have a new set of 3 distributions. As before, each of these distributions has a mean of 10 but a different amount of spread.

a. Based on looks, order the distributions from *least amount of variability* to *most amount of variability*.

*Order* \_\_\_\_\_  
 Least spread ..... Most spread

It may help to fill in the table of data values.

b. Use your measurement of spread to measure the variability in each of these distributions. Does your measurement work? Why or why not?



Data set D	Data set E	Data set F

c. If necessary, devise a new measurement using the same specifications as above.  
*Explain or show how your measurement works:*

