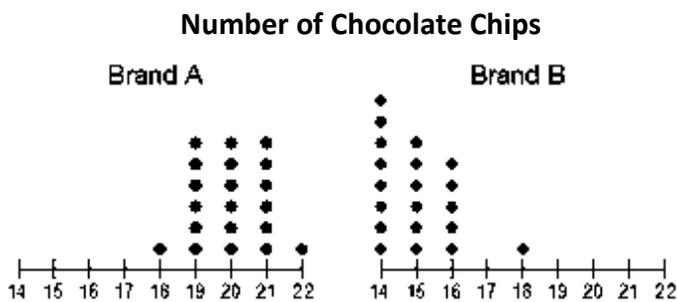


# 4.2 Data Distributions

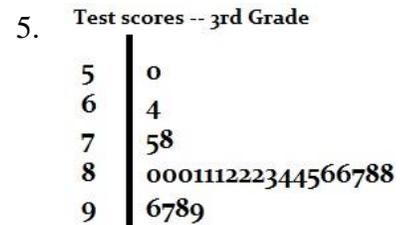
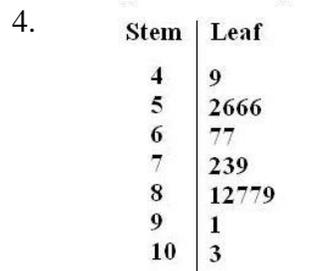
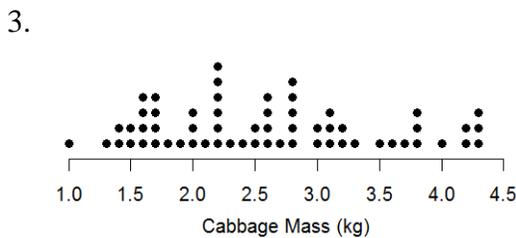
# A1CC 4.2 Corrective Assignment

- Fill in each blank with *always*, *sometimes*, or *never* to make a true statement.
  - An outlier and the mean of a set are \_\_\_\_\_ equal.
  - The median is \_\_\_\_\_ the maximum value in a data set.
  - If a distribution is skewed left, the median will \_\_\_\_\_ be greater than the mean.
  - If you add two outliers to a data set, the standard deviation will \_\_\_\_\_ change.
  - If you add a number to a data set, the median will \_\_\_\_\_ change.
- Use the dotplots to fill in the table.



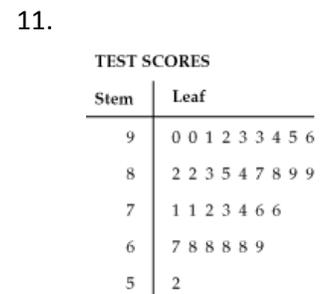
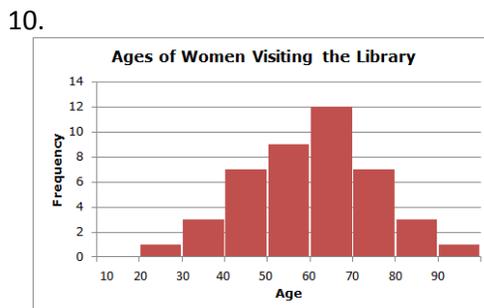
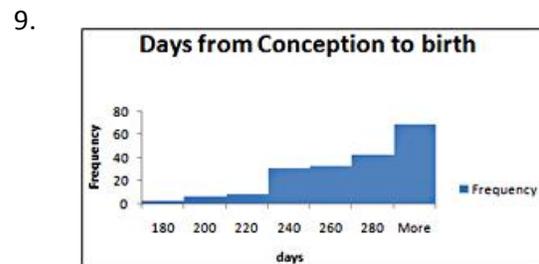
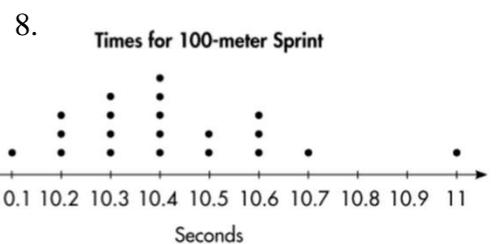
Number of Chocolate Chips		
	Brand A	Brand B
Mean		
Median		
Standard Deviation		

Estimate the mean and median of the distribution. Then, tell whether the distribution is skewed left, skewed right, or symmetric.



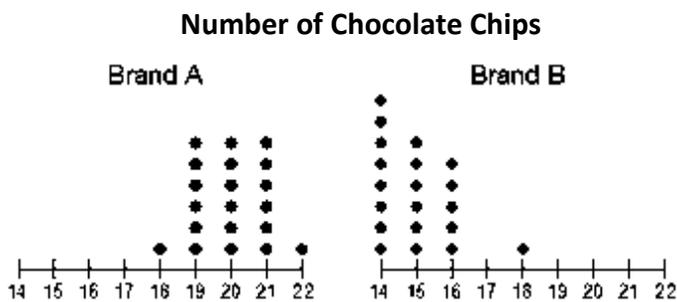
6. Price of Socks (pair)  
 Mean = \$3.80  
 Median = \$4.00  
 Standard Deviation = 2.8

7. Cost of Ride  
 Median = \$25.6  
 Mean = \$20.2  
 Standard Deviation = 5.6



KEY  
 $5 \overline{)2} = 52$

- Fill in each blank with *always*, *sometimes*, or *never* to make a true statement.
  - An outlier and the mean of a set are Never equal.
  - The median is Sometimes the maximum value in a data set.
  - If a distribution is skewed left, the median will Always be greater than the mean.
  - If you add two outliers to a data set, the standard deviation will Always change.
  - If you add a number to a data set, the median will Sometimes change.
- Use the dotplots to fill in the table.



Number of Chocolate Chips		
	Brand A	Brand B
Mean	20	15
Median	20	15
Standard Deviation	1.0	1.1

Estimate the mean and median of the distribution. Then, tell whether the distribution is skewed left, skewed right, or symmetric.

What is MOST IMPORTANT in grading these is that you identify whether the mean is greater than or less than the median in distributions that are skewed. The actual numbers are less important.... Try to get close!

- They are about the same at around 2.7...  
MAYBE skewed right a little so the median might be just a little bit higher than the median.
- They are about the same... both around 73.
- They are about the same... both around 83.
- and 7. The mean is less than the median, so it is skewed left.
- The median is around 10.4. The mean would be a little bit higher because of the outlier. (mean = 10.45 ish) Otherwise, the shape is pretty symmetric.
- The median is greater than the mean because it is skewed left. The median is about 270 while the mean is around 265.
- They are about the same... both around 64.
- You have to be careful with this because the the Stem DECREASES. This is actually skewed LEFT... not right. The median is about 88 and the mean is about 82ish.