



1.2 Dot plots and Stem-and-Leaf plots

In a **dot plot** each data entry is plotted using a point above a horizontal axis.

A dot plot allows us to

- analyze how data is distributed (its shape)
- determine specific data entries
- identify unusual data values (possible outliers)

A company with 278 employees was concerned that there was a problem with their employees showing up late to work. Therefore, management recorded how many minutes each person was late. If they showed up early or on time no information was collected for that employee.

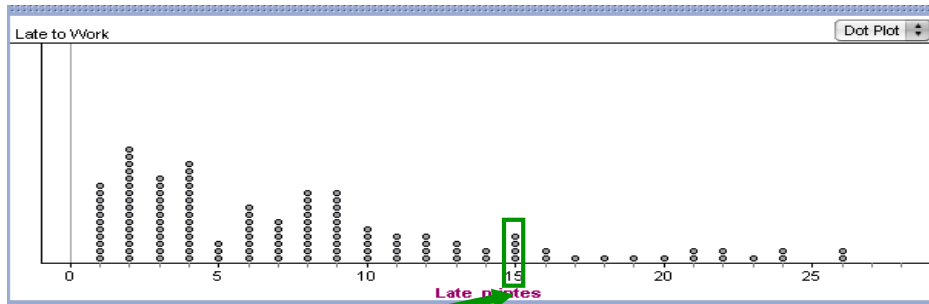
Minutes Late to Work

1	3	6	9	21
1	3	6	10	22
1	3	6	10	22
1	3	6	10	23
1	3	6	10	24
1	3	7	10	24
1	3	7	11	26
1	3	7	11	26
1	3	7	11	27
1	3	7	11	
1	4	7	12	
1	4	8	12	
2	4	8	12	
2	4	8	12	
2	4	8	13	
2	4	8	13	
2	4	8	13	
2	4	8	14	
2	4	8	14	
2	4	8	15	
2	4	8	15	
2	4	9	15	
2	4	9	15	
2	4	9	16	
2	5	9	16	
2	5	9	17	
2	5	9	18	
2	6	9	19	
3	6	9	20	
3	6	9	21	

Minutes late to work



Late to Work Dot Plot



What does this column represent?

The **range** of the data set is defined as

What is the range of the late to work data set?

The **mode** of the data set is defined as

What is the mode of the late to work data set?



Shape is important in data distributions.

Skewed Distributions.

Skewed Left:

Skewed Right:

How would you describe the shape of our data?



Stem and Leaf Diagrams

scores			
47	4		7
57	5		7
63			
67	6		3 7 8
68			
73	7		3 3 3 8 9
73			
73	8		0 0 0 0 0 0 3 3 5 7
73			
78	9		0 2 2 2 2 5 5
79			
80			
80			
80			
80			
80			
83			
83			
85			
87			
90			
92			
92			
92			
92			
95			
95			
98			

Legend: 4 | 7 = 47

The following are the numbers of text messages sent last week by the cellular phone users of the junior class at Porter-Gaud.

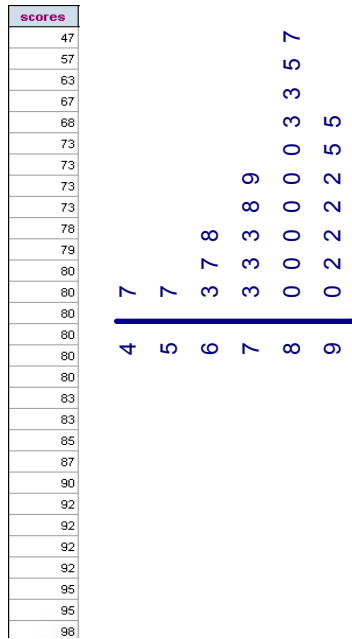
155	159	144	129	105
145	116	130	114	122
126	112	112	142	126
118	118	108	122	121
109	140	136	119	113
117	119	107	139	128
145	163	143	152	160
148	136	92	146	133
98	104	123	107	96

Construct a stem and leaf diagram for the number of text messages sent by members of the junior class at PG. What stems should we use? Be sure your stem and leaf plot has ordered leaves.



If you rotate a stem and leaf diagram 90 degrees counterclockwise, a _____ is created.

Consider the data set called "scores".



Compare the rotated stem and leaf plot with the histogram below.

