Line Plots and Stem and Leaf Plots

6th Grade Mathematics

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Example 1

Use a line plot to organize the math exam scores.

Student Test Scores			
100	95	75	80
60	100	60	75
90	85	80	100
50	90	65	80

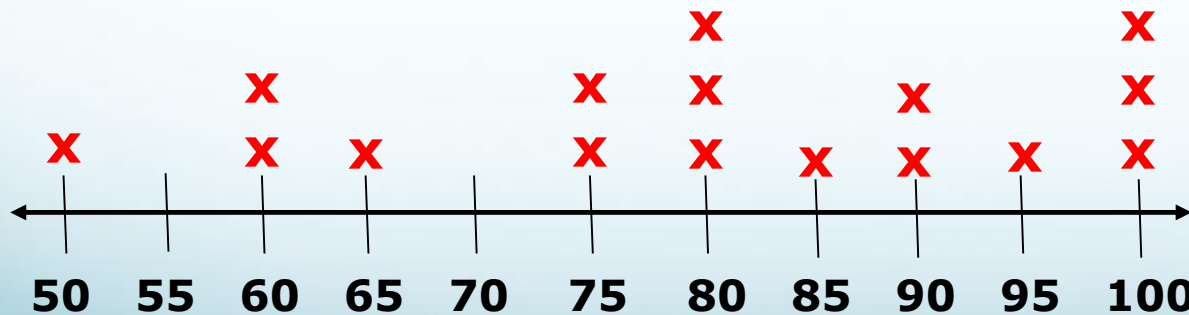**Step 1:** Find the least and greatest values in the data set. Then draw a number line that includes these values.

least value: 50   greatest value: 100

Example 1 Continued

Student Test Scores			
100	95	75	80
60	100	60	75
90	85	80	100
50	90	65	80

Step 2: Place an x above the number on the number line that corresponds to each student's test score.

There are 16 numbers in the data set and 16 x's above the number line.

A **stem-and-leaf plot** uses the digits of each number in a data set to group the individual numbers. Each *leaf* on the plot represents the right-hand digit in a data value, and each *stem* represents left-hand digits. The key shows the values of the data on the plot.

Stems	Leaves
2	4 7 9
3	0 6

Key: 2|7 means 27

Example 2

The data shows the number of years coached by the top 15 coaches in the all-time NFL coaching victories. Make a stem-and-leaf plot of the data. Then find the number of coaches who coached fewer than 25 years.

33, 40, 29, 33, 23, 22, 20, 21, 18, 23, 17, 15, 15, 12, 17

Step 1: Order the data from least to greatest. Since the data values range from 12 to 40, use tens digits for the stems and ones digits for the leaves.

Example 2 Continued

The data shows the number of years coached by the top 15 coaches in the all-time NFL coaching victories. Make a stem-and-leaf plot of the data. Then find the number of coaches who coached fewer than 25 years.

33, 40, 29, 33, 23, 22, 20, 21, 18, 23, 17, 15, 15, 12, 17

Step 2: List the stems from least to greatest on the plot.

The stems are the tens digits.

Stems	Leaves
1	
2	
3	
4	

Example 2 Continued

The data shows the number of years coached by the top 15 coaches in the all-time NFL coaching victories. Make a stem-and-leaf plot of the data. Then find the number of coaches who coached fewer than 25 years.

33, 40, 29, 33, 23, 22, 20, 21, 18, 23, 17, 15, 15, 12, 17

Step 3: List the leaves for each stem from least to greatest.

The stems are the tens digits.

Stems	Leaves
1	2 5 5 7 7 8
2	0 1 2 3 3 9
3	3 3
4	0

The leaves are the ones digits.

Example 2 Continued

Step 4: Add a key and a title.

The stems are the tens digits.

Number of Years Coached

Stems	Leaves
1	2 5 5 7 7 8
2	0 1 2 3 3 9
3	3 3
4	0

The leaves are the ones digits.

Key: 2 | 1 means 21.

11 coaches coached fewer than 25 years.

Practice 1

The list shows the number of times each soccer player can bounce the ball on their knee. How many soccer players can bounce the ball more than 36 times.

55, 60, 33, 30, 23, 45, 28, 41, 62, 29, 35, 40, 43, 37, 68, 30, 61, 27, 38, 41

Step 1: Order the data from least to greatest. Since the data values range from 23 to 68, use tens digits for the stems and ones digits for the leaves.

The list shows the number of times each soccer player can bounce the ball on their knee. How many soccer players can bounce the ball more than 36 times.

55, 60, 33, 30, (23), 45, 28, 41, 62, 29, 35, 40, 43, 37, (68), 30, 61, 27, 38, 41

Step 2: List the stems from least to greatest on the plot.

The stems are the tens digits.

Stems	Leaves
2	
3	
4	
5	
6	

Step 3: List the leaves for each stem from least to greatest.

Step 4: Add a key and a title.