Week of April 13-17	Grade Level: 7 Team:
Directions: Choose either a High Tech, Low Tech, or No Tech activity for each subject. All work should be submitted to the teacher of that content.	

Date	HIGH TECH (USE WITH LAPTOP)	LOW TECH (USE WITH CELL PHONE)	NO TECH (NO TECHNOLOGY)	EXTENSION ACTIVITIES
Math	Lesson: This week students will calculate measures of center (mean, median, mode, and range), and interpret data from different representations (tables and dot plots)			
	Day 1: Students will watch this review of finding Mean, Median, Mode, and Range, including 5 practice problems.	Day 1: Students will watch this review of finding Mean, Median, Mode, and Range, including 8 practice problems. If watching the video is not convenient, students may review the notes (see notes) and complete the 8 practice problems.	Day 1: Students will review methods (see notes) used to find Mean, Median, Mode, and Range on this paper. Then, complete 8 practice problems and check answers at the bottom of the page..	As you are able throughout the week, please find extension activities linked below. These are not required, but are excellent practice of multiple skills. Use Your Shoes Buying Drinks at the Park Bugs, Giraffes, Elephants and More
	Day 2: Students will complete a quizizz practice using the code below for their class. Make sure you put your first and last name. Take a screenshot of the final screen and submit in Canvas. Madden: 216968	Day 2: Students will complete this quizizz on paper, and take pictures of their work and send it to their teacher.	Day 2: Students will complete this quizizz on paper to turn in.	

	Neumann: 404499 Sanders: 583754			
	Days 3 and 4: Students will watch the video including practice problems on interpreting data from Line Graphs, Bar Graphs, and Dot Plots. Work on the following IXL assignments: 7.BB.1 7.BB.2 7.BB.4 7.BB.7 7.BB.9	Days 3 and 4: Students will review the notes, and complete included practice problems on interpreting data from Line Graphs, Bar Graphs, and Dot Plots. Work on the following IXL assignments: 7.BB.1 7.BB.2 7.BB.4 7.BB.7 7.BB.9	Days 3 and 4: Students will review the notes, and complete included practice problems on interpreting data from Line Graphs, Bar Graphs, and Dot Plots. Students can choose to work on optional questions built into the notes.	
	Day 5: Students will zoom conference with teacher to ask questions and have discussions about the Movie Sequel assignment. Then students will complete the assignment using Kami and submit on Canvas.	Day 5: Students may zoom conference with teacher to ask questions and have discussions, then complete the Movie Sequel assignment. If it is challenging to submit the work on Canvas, students will take pictures of their work and email to teachers.	Day 5: Students will complete the Movie Sequel assignment on paper, and return to their teacher.	

Day 1 Notes:

Find the mean, median, mode and range of the following:

9, 3, 2, 1, 7, 6, 7

Mean: the average of a set of numbers

- Add numbers and divide by the amount of numbers in the set
- **Step 1**: 9 + 3 + 2 + 1 + 7 + 6 + 7 = 35 **Step 2**: 35 ÷ 7 = 5
- Answer = 5

Median: the middle number

- Order the numbers from least to greatest:

  1, 2, 3, 6, 7, 7, 9

- Answer: 6
- If there are 2 numbers in the middle find their average

Mode: the number that occurs the most

- Answer: 7

Range: difference of highest and lowest number

- 9 - 1 = 8
- Answer = 8

Day 1 Practice Questions:

Read and find the answer to each question below. Use the notes to help when needed and check the answers at the bottom when you are finished.

1. What is the mean of the following numbers? 10, 39, 71, 39, 76, 34, 25
   a. 42
   b. 39
   c. 42.5
   d. 35.5

2. A group of customer service surveys were sent out at random. The scores were 90, 50, 70, 80, 70, 60, 20, 30, 80, 90, and 20. What number would you divide by to calculate the mean?

3. What is the median of the following numbers? 10, 39, 71, 42, 39, 76, 38, 25
   a. 42.5
   b. 39
   c. 42
   d. 35.5

4. What is the median score achieved by a student who recorded the following scores on 7 math quizzes? 68, 62, 71, 58, 81, 82, 79

5. What is the mode of the following numbers? 12, 11, 14, 10, 8, 13, 11, 9
   a. 11
   b. 10
   c. 14
   d. 8

6. Can a set of data have more than one mode?

7. What is the range of the following numbers? 10, 39, 71, 39, 76, 38, 25

8. The temperature in °F on 20 days during the month of June was as follows:

   70, 76, 76, 74, 70, 70, 72, 74, 76, 80

   What is the range of the temperatures for the month of June?

Answer Key: 1) 42 2) 11 3) 39 4) 71 5) 11 6) Yes 7) 66 8) 10

Day 2 Quizizz Practice:

QUIZIZZ

NAME : _____

CLASS : _____

DATE : _____

Mean, Median, Mode & Range

14 Questions

1. What is the range?

- [ ] a) The sum of the largest and smallest number
- [ ] b) The number in the middle
- [ ] c) The difference between the largest and smallest number
- [ ] d) The number that appears most often

2. What is the median?

- [ ] a) The number in the middle when the numbers are in order from least to greatest.
- [ ] b) The difference between the largest and smallest number.
- [ ] c) The average
- [ ] d) The number that appears most often.

3. What is the mode?

- [ ] a) The average
- [ ] b) The number that appears most often.
- [ ] c) The largest number - the smallest number
- [ ] d) The number in the middle.

4. To find the average of a set of numbers, add up all the items and divide by...

☐ a) 2.
☐ b) The smallest number
☐ c) The largest number
☐ d) The number of items in the set.

5. A data set can have more than one mode

☐ a) True
☐ b) False

6. When you are trying to find the MEDIAN of a set of data and 2 numbers are left in the middle after putting them in order from least to greatest, what do you do?

☐ a) List both of the numbers as the Median.
☐ b) Add the two numbers together and divide by 2.
☐ c) Pick the one that you want.
☐ d) Subtract the two numbers.

7. Roger bowled 7 games last weekend. His scores are: 155, 165, 138, 172, 127, 193, 142. What is the range of Roger's scores?

☐ a) 193
☐ b) 127
☐ c) 60
☐ d) 66

8. The mode score on the 6th grade math test was 94! Which of these interpretations must be correct?

☐ a) 99 was the highest score on the test.
☐ b) More students received a 94 than any other score
☐ c) No student scored below a 50
☐ d) A score of 91 was slightly below average.

9. The number of miles that Jenna cycled each week for a 7-week period is shown: 36, 42, 28, 52, 48, 36, 31 What is the median number of miles Jenna cycled?

☐ a) 24
☐ b) 39
☐ c) 36
☐ d) 52

10. In order to find the median, the data must be sorted from least to greatest first.

☐ a) True
☐ b) False

11. 

Dr. Dre is a dentist. He needs to report on the average (Mean) number of cavities that his patients have.1, 0, 1, 5, 0, 3, 4. What is the average number of cavities?

☐ a) 14

☐ b) 2

☐ c) 7

☐ d) 1

12. 

At Donald's Donuts the number of donut holes in a bag can vary. Help Donald find the MODE.12,10,10,10,13,12,11,13,10

☐ a) 10

☐ b) 12

☐ c) 10 and 12

☐ d) No Mode

13. The heights of some students are given.158cm 172cm 164cm164cm 167cm 159cm What is the RANGE of the heights?

☐ a) 13 cm

☐ b) 330 cm

☐ c) 164 cm

☐ d) 14 cm

14. What is the MEDIAN of this set of data?10, 90, 80, 60, 50, 40, 70, 30, 20, 100

☐ a) 50

☐ b) 60

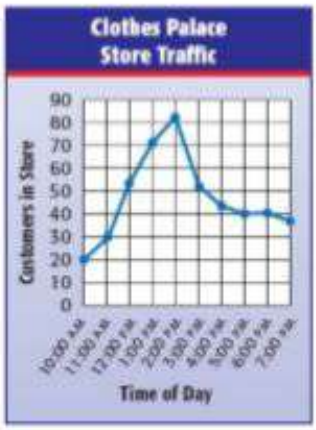
☐ c) 55

☐ d) 45

Day 3 and 4 Notes/Examples:

Types of Graphs: Different Ways to Represent Data

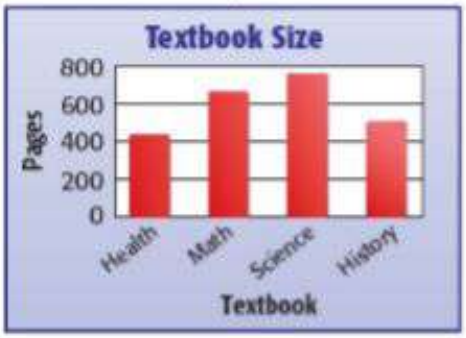
Line Graphs



- Line graphs are used to display continuous data.
- Line graphs can be useful in predicting future events when they show trends over time.

Bar Graphs

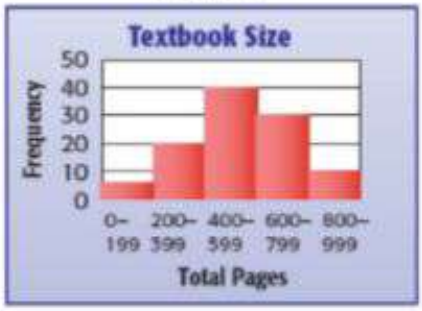
Graph A



- Bar graphs are used to display categories of data.
- A bar graph is one method of comparing data by using solid bars to represent unique quantities.

Histograms

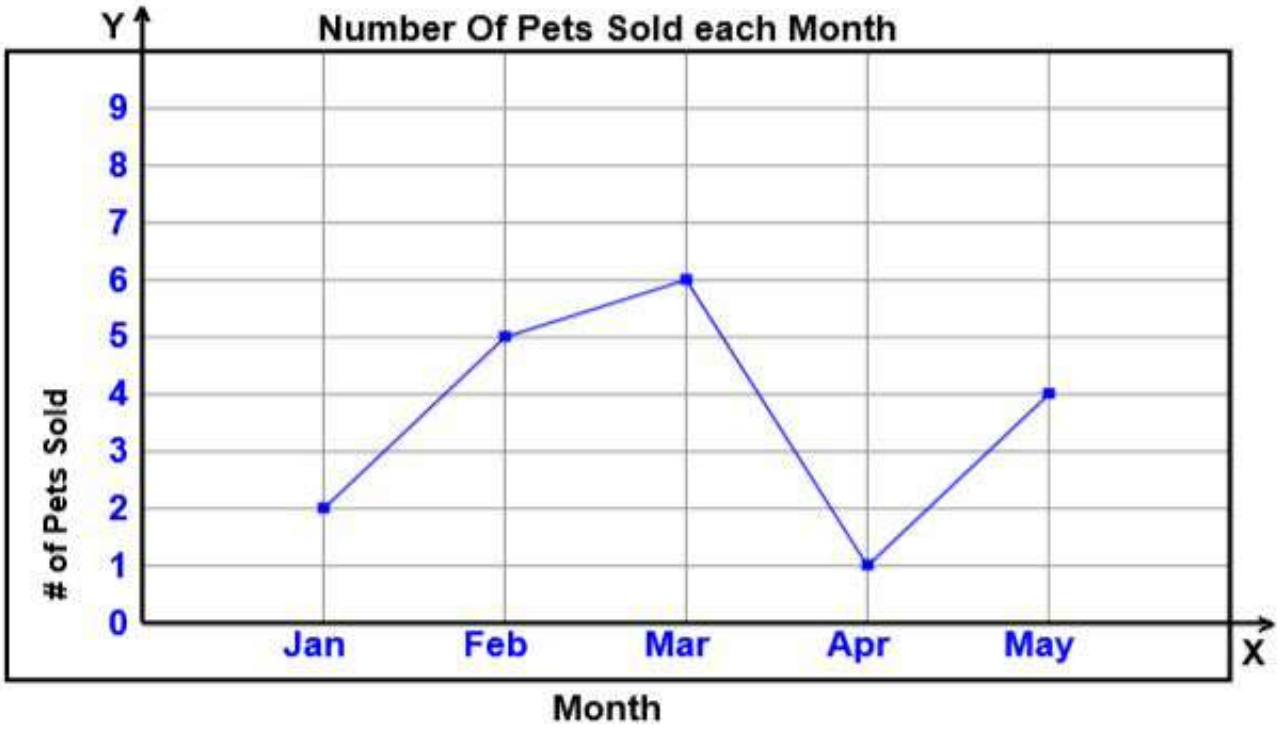
Graph B



- A special kind of bar graph that uses bars to represent the frequency of numerical data that have been organized into intervals.
- Because the intervals are all equal, all of the bars have the same width
- Because the intervals are continuous (connected; ongoing), there is no space between the bars.

Line Plot Practice (Day 3 and 4 optional practice)

Graph the given information as a line graph.



How many pets were sold in Apr? _____

How many pets were sold in Feb? _____

Did the number of pets sold increase or decrease between Feb and Mar? _____

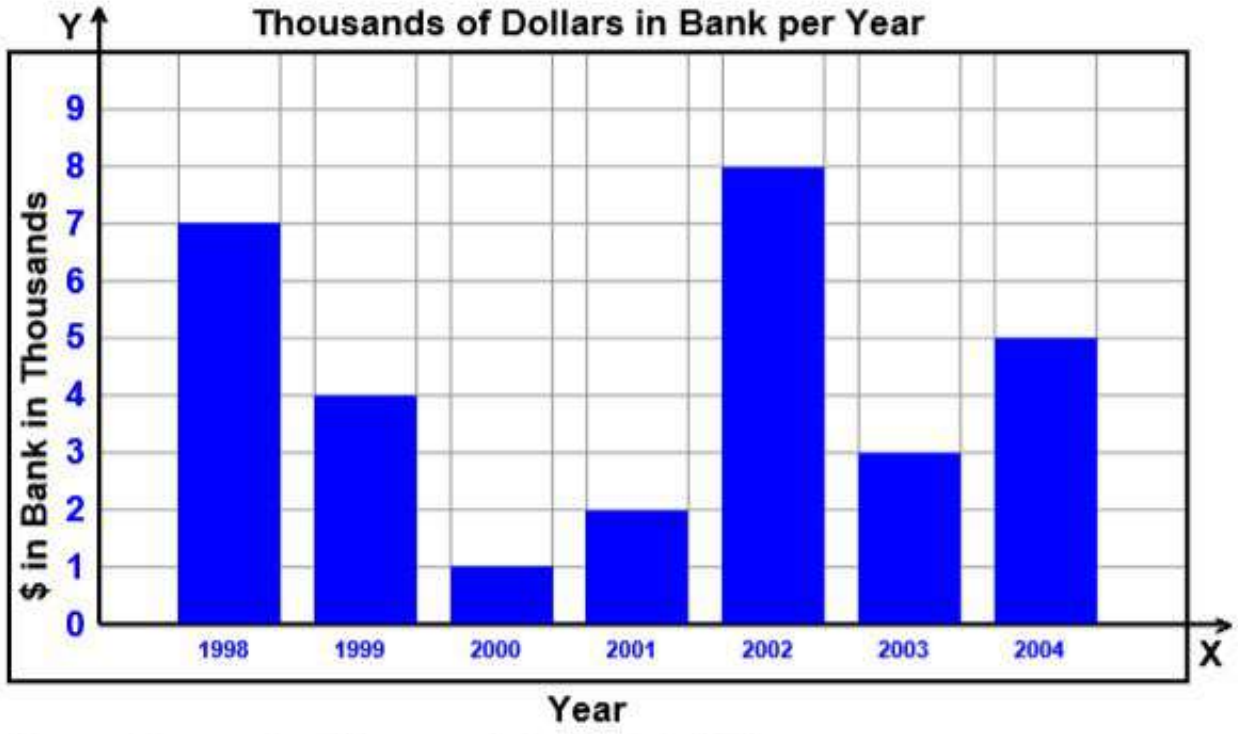
Were more pets sold in Mar or Jan? _____

Which month had the greatest number of pets sold? _____

Bar Graph Practice (Day 3 and 4 optional practice)

Reading Bar Graphs

Answer the following questions based off the bar graph.



How much money in dollars were in the bank in 2004 and 2002 in total? _____

How much money in more dollars were in the bank in 2002 than in 2000? _____

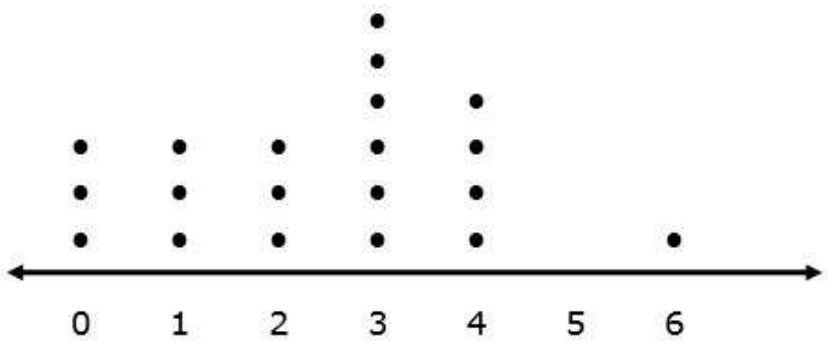
How much money in dollars were in the bank in 2001, 2000, and 1998? _____

In 1996, twice the number of dollars were in the bank than from 1998-2004. How many thousands of dollars were in the bank in 1996? _____

Were more dollars in the bank in 1998 or in 2001? _____

Dot Plot Practice (Day 3 and 4 Optional Practice)

1. The students in one social studies class were asked how many brothers and sisters (siblings) they each have. The dot plot here shows the results.

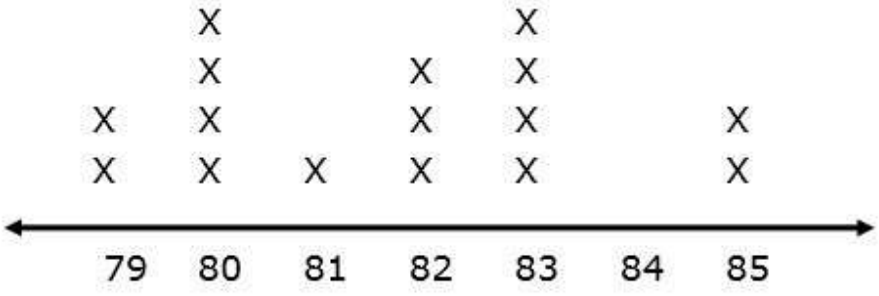


a. How many of the students have six siblings?

b. How many of the students have no siblings?

c. How many of the students have three or more siblings?

2. The resting pulse rates were recorded for 16 boys in gym class before they exercised. The line plot here shows the results.



a. What is the range of the pulse rates?

b. How many boys had a pulse rate over 81?

c. How many boys had a pulse rate of 83?

Movie Sequel - Day 5 Required

Movie Sequels

More and more new movies today are sequels to earlier, successful movies. Are sequels as good as the original film? What kind of factors or data would you consider to answer this question?

The table below gives the Metacritic[1] score from a random sample of movies and their sequels.

Movie Series	Original	Sequel
Toy Story & Toy Story 2	92	88
Spider Man & Spider Man 2	73	83
Monsters Inc. & Monsters U	78	65
Night at the Museum & Night at the Museum: Battle for the Smithsonian	48	42
Shrek & Shrek 2	84	75
Star Wars & Empire Strikes Back	91	78
Pirates of the Caribbean: The Curse of the Black Pearl & Pirates of the Caribbean: Dead Man's Chest	63	53
XMEN & X2	64	68
Harry Potter and the Philosopher's Stone & Harry Potter and the Prisoner of Azkaban (1st & 3rd Potter Movies)	64	82
Princess Diaries & Princess Diaries 2	52	43
How to Train Your Dragon & How to Train Your Dragon 2	74	76
Hunger Games & Hunger Games Catching Fire	67	75

1. Use measures of central tendency (mean, median, mode, range) to compare the Metacritic scores of the originals and the sequels.

2. Create plots to compare the two data sets, consider a histogram, frequency table, bar graph or others.

3. Use your data analysis to make a case for the original movies being better.

4. Use your data analysis to make a case for the sequels being better.

5. How can we improve on our data analysis of originals movies and their sequels? How can we compare them with more certainty?

[1]Metacritic is a website that aggregates reviews of movies, games, music and other entertainments.

Extension Activities (Optional):
Use Your Shoes (page 1)

1. Create a frequency chart for this sample set of shoes sizes: 6, 10, 9, 8, 8, 6, 12, 14, 9, and 8.

Student #	Shoe Size
A	6
B	10
C	9
D	8
E	8
F	6
G	12
H	14
I	9
J	8

Shoe Size

Find:

A. **Mean:** add all shoe sizes and divide by total number of students.

$$\frac{\text{Sum of all shoe sizes}}{\text{Total number of students}} = \frac{\quad}{\quad} =$$

B. **Median:** write all shoe sizes in order from least to greatest and find the middle shoe size.

				○	○				

If there are two middle shoe sizes, add those two sizes and divide by 2

$$\frac{\quad + \quad}{2} =$$

C. **Mode:** find the shoe size that occurs the most.

Extension Activities (Optional):
Use Your Shoes (page 2)

2. Second sample: Last week, Jane sent 34 text messages, John sent 25, Sofia sent 41, Priscilla sent 12, Cisco sent 33, Fred sent 24, and Riley sent 25.

Name	# Of messages sent

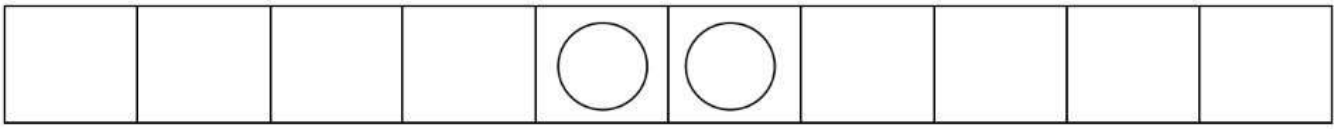
Total Number of Texts

Find:

A. **Mean:** add all text messages and divide by the number of students.

$$\frac{\text{Total text messages}}{\text{Total number of students}} = \frac{\quad}{\quad} =$$

B. **Median:** write all numbers of messages sent from least amount to greatest and find the middle data point.



If there are two data points in the middle, add them and divide by 2.

$$\frac{\quad + \quad}{2} =$$

C. **Mode:** find the amount of messages sent that occurs most frequently.

Use Your Shoe!

Guided Practice

Review vocabulary: mean, median, mode.

A. Mean is the sum of all values divided by the number of values in the data set. Another term used for mean is *average*.

B. Median is the middle value in the data set. If there are two middle values, add them and divide by two.

C. Mode is the most frequently occurring value data point of the set.

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

Shoe Size

Mean (add all shoe sizes / total # of students) = _____

Add all shoe sizes / Total # of students	=	_____	

Median (write all shoe sizes in order from least to greatest, find the middle shoe size. If there are two middle shoe sizes, add them up and divide by 2) = _____

Mode (find the shoe size that occurs most frequently) = _____

Extension Activities (Optional):
Buying Drinks at the Park (page 1)

Last year when I went to Kings Dominion amusement park in Virginia, the menu sign below caught my eye so I took a picture of it. I am frugal. I will usually just ask for a free cup of ice water. My family, on the other hand, enjoys the sugary goodness of a soda.

There are four options for purchasing soda in the image:

- 20 oz. cup for $4.29
- 30 oz. cup for $4.69
- A green refillable mug for $14.99 (free refills on day of purchase, $1 refills on other days)
- An orange $24.99 mug that includes unlimited free refills.

1. Which beverage option would you choose (green mug, orange mug, 20 oz., or 30 oz.) and why? The mugs contain 24-25 oz.

2. Complete the following table to compare the overall cost of the purchase options.

	2 drinks in one day	4 drinks in two days (2 each day)	6 drinks in two days (3 each day)
20 oz. ($4.29 each)			
30 oz. ($4.69 each)			
Green mug ($14.99 + $1 refill in future)			
Orange mug ($24.99 unlimited refills)			

3. Either by hand or by using Desmos, create a graph of your data from the chart above. If you use Desmos, fill in the rest of the url that shows your graph to me.

   https://www.desmos.com/_____

   (Note: the equation for the green mug will be flawed since you do not have values for the number of drinks consumed during the day. Assume that **all** refills cost $1 for the purposes of the equation/graph).

Extension Activities (Optional):
Buying Drinks at the Park (page 2)

4. **Extension question** (optional): Supply the equations for your data here.

5. When is buying a 20 oz. drink the 'best buy'?

6. When is buying an orange ($24.99 unlimited) mug a good idea?

7. Should you ever buy a green mug?

8. Are there any advantages to buying an orange mug? Are there any disadvantages?
   Advantages:

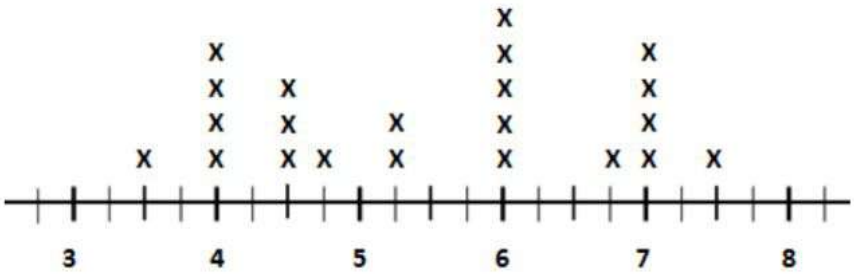
   Disadvantages:

Bonus: How many 16.9 ounce bottles of DaSani are needed to have a gallon of water? There are 128 ounces in a gallon? How much would it cost to buy this water at the $3.99 per 16.9 ounce rate?

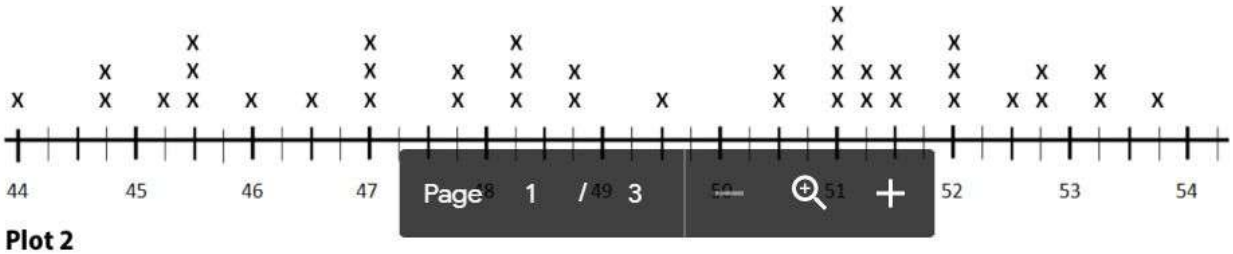
Bugs, Giraffes, Elephants, and More

Activity

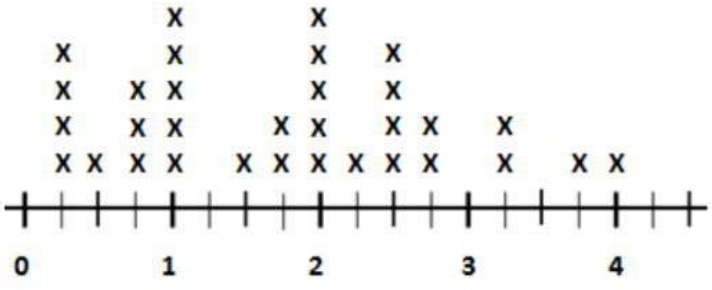
Look at the five line plots below. The line plots contain data collected during a field trip to the zoo. Each plot is missing important information: what is being measured and the unit of measure being used.



Plot 1

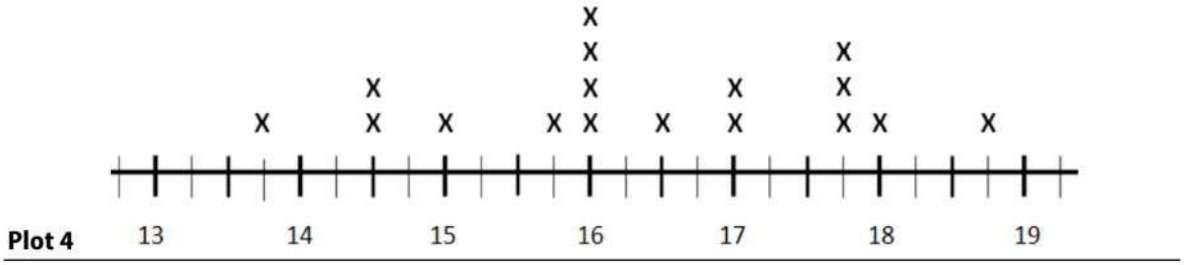


Plot 2

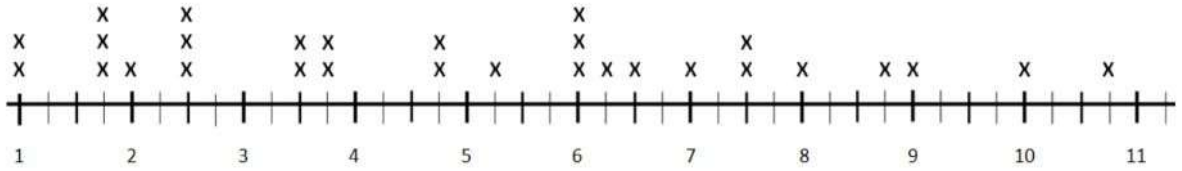


Plot 3

Extension Activities (Optional):
Bugs, Giraffes, Elephants and More (page 2)



Plot 4



Plot 5

Extension Activities (Optional):
Bugs, Giraffes, Elephants and More (page 3)

1. Which of the plots do you think shows (write the number of the plot in the blank):
   a. The length in cm of bugs collected on the last field trip? _____
   b. The height in feet of adult giraffes? _____
   c. The height in inches of fourth graders? _____
   d. The weight in tons of adult elephants? _____

2. Explain why you think the plot you picked for 1c above is the one that shows the heights of fourth graders.

3. Why do you think the other plots do not show the heights of fourth graders?

4. Which plot was not used? _____ What do you think this plot data could be about? Explain.

5. Look at Plot 1.
   a. How many individuals are represented? _____
   b. What is the largest value? _____
   c. What is the smallest value? _____
   d. Find the difference between the largest and smallest individuals. _____ Explain what this tells you.

   e. What value has the most individuals? _____ How many? _____

6. Look at Plot 4.
   a. How many individuals are represented? _____
   b. What is the largest value? _____
   c. What is the smallest value? _____
   d. Find the difference between the largest and smallest individuals. _____ Explain what this tells you.

   e. What value has the most individuals? _____ How many? _____