LEARNING OUTCOMES (L.O.)

- I can represent and interpret the detail data in dot plots.

Name _____

Lesson 3: Dot Plots

Warm Up:

Twenty students were surveyed about the number of days they played outside in one week. The results of this survey are shown below.

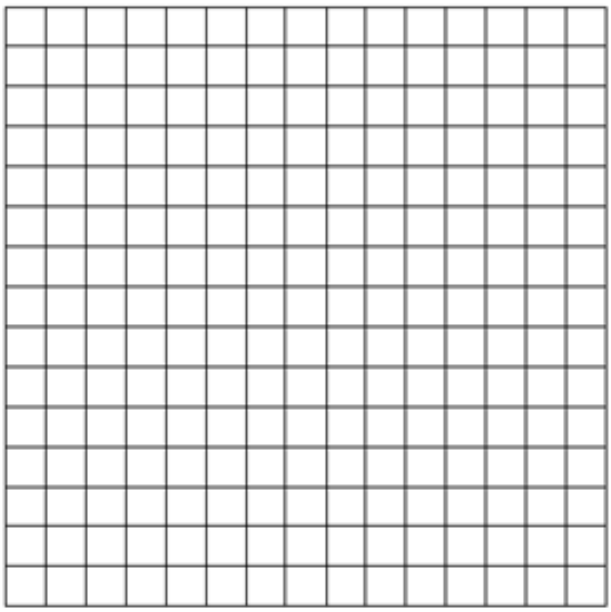
{6, 5, 4, 3, 0, 7, 1, 5, 4, 4, 3, 2, 2, 3, 2, 4, 3, 4, 0, 7}

Complete the frequency table below for these data.

Number of Days Outside

Interval	Tally	Frequency
0–1		
2–3		
4–5		
6–7		

Construct a histogram for the above data on the grid below.



DOT PLOTS

Dot plots can be used to represent detail data. Dot plots display a plot of each data value on a scale or number line.

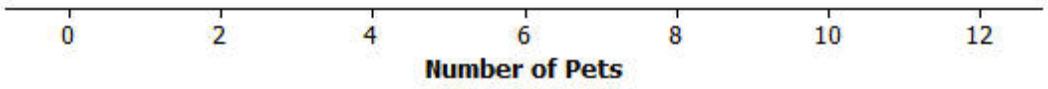
Consider the following three sets of data.

Example 1: *Data Set 1: Pet owners*

Students from River City High School were randomly selected and asked, "How many pets do you currently own?" The results are recorded below.

0	0	0	0	1	1	1	1	1	1	1	1	1	1	2
2	2	2	3	3	4	5	5	6	6	7	8	9	10	12

Construct a dot plot of the data in data set 1.



Calculate the mean number of pets owned by the thirty students from River City High School. Calculate the median number of pets owned by the thirty students.

What do you think is a typical number of pets for students from River City High School? Explain how you made your estimate.

Example 2: *Data Set 2: Length of the east hallway at River City High School*

Twenty students were selected to measure the length of the east hallway. Two marks were made on the hallway's floor, one at the front of the hallway, and one at the end of the hallway. Each student was given a meter stick and asked to use the meter stick to determine the length between the marks to the nearest tenth of a meter. The results are recorded below.

8.2	8.3	8.3	8.4	8.4	8.5	8.5	8.5	8.5	8.5
8.6	8.6	8.6	8.6	8.7	8.7	8.8	8.8	8.9	8.9

Construct a dot plot of the data in data set 2.

What is the mean length of the east hallway data set? What is the median length?

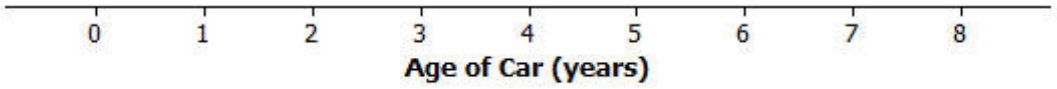
Why do you think that different students got different results when they measured the same distance of the east hallway?

Example 3: *Data Set 3: Age of cars*

Twenty-five car owners were asked the age of their cars in years. The results are recorded below.

0	1	2	2	3	4	5	5	6	6	6	7	7
7	7	7	7	8	8	8	8	8	8	8	8	

Construct a dot plot of the data in data set 3.



What is the mean age of the twenty-five cars? What is the median age? Why are the mean and the median different?

What number would you use as an estimate of the typical age of a car for the twenty-five car owners? Explain your answer.

Name _____ Date _____

Lesson 3: Dot Plots ***CW/HW***

1. Thirty female users and twenty-five male users were selected at random from a database of people who play the game regularly. Each of them agreed to be part of a research study and report their scores. A leadership score is based on a player's answers to leadership questions. A score of 1 to 40 is considered a beginning level leadership score, a score of 41 to 60 is considered a middle level leadership score, and a score of greater than 60 is considered an advanced level leadership score.

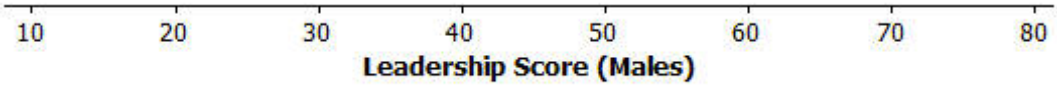
   Use the following data to make a dot plot of the female scores, a dot plot of the male scores, and a dot plot of the scores for the combined group of males and females.

Female scores:

10	20	20	20	30	30	30	40	40	40
50	50	55	65	65	65	65	65	70	70
70	70	76	76	76	76	76	76	76	76

Male scores:

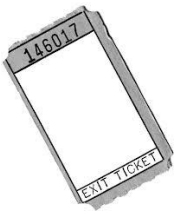
15	20	20	25	25	25	25	30	30	30
30	30	30	35	35	35	35	35	40	40
40	45	45	45	50					



2. What do you think is a typical score for a female user? What do you think is a typical score for a male user? Explain how you determined these typical scores.

3. Why is it more difficult to report a typical score for the overall group that includes both the males and females?

4. Production costs will only allow for two video advertisements to be developed. Which two videos would you recommend for development? Explain your recommendations.



Name _____

Lesson 3: Dot Plots

Exit Ticket

Each person in a random sample of ten ninth graders was asked two questions:

- How many hours did you spend watching TV last night?
- What is the total value of the coins you have with you today?

Here are the data for these ten students:

Student	Hours of TV	Total Value of Coins (in dollars)
1	2	0.00
2	1	0.89
3	0	2.19
4	3	0.15
5	4	1.37
6	1	0.36
7	2	0.25
8	2	0.00
9	4	0.54
10	3	0.10

1. Construct a dot plot of the data on hours of TV.

2. If you wanted to describe a typical number of hours of TV for these ten students, would you use the mean or the median? Calculate the value of the measure you selected.