Interpreting Dot Plots (Line Plots)

Use the data in the dot plot to answer questions 1-4.

Nature Club Shells Collected

x				
x			x	x
x		x	x	x
x		x	x	x
x	x	x	x	x x
1	2	3	4	5

Number of Shells Collected
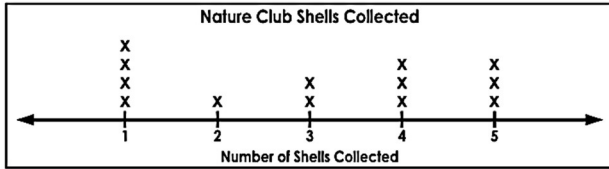
1) What is the mean number of shells collected? _____

2) What is the median number of shells collected? _____

3) What is the mode? _____

4) What is the range? _____

Exercise (h)
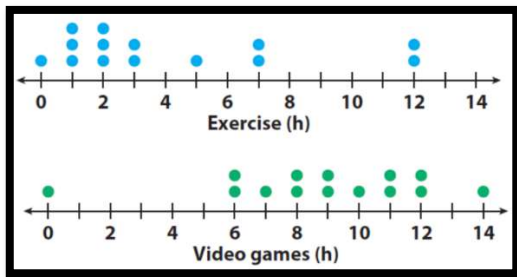
Video games (h)

Fourteen students were surveyed about the time they spend exercising and playing video games each week. Compare the data by answering the questions 5-8.

5) What is the **range** for the hours of exercise? _____

   For playing video games? _____

6) What is the **mode** for exercise? _____

   Playing video games? _____

7) What is the **median** hours spent exercising? _____

   Playing video games? _____

8) What is the **mean** number of hours spent exercising? _____

   Playing video games? _____

Frequency Tables

A **frequency table (chart)** displays data that has been collected.

Season Soccer Scores

Score	Tally	Frequency
1	/	1
2	/	1
3	///	3
4	/	1
5	////	4

Intervals & Frequency Tables

Number of Cups of Coffee

Intervals	Tally	Frequency
0 – 3	//	2
4 – 7	///	3
8 – 11	///// ///	8
12 – 15	///	3
16 – 19	//	2

Intervals must be:

1) **equal in values**

2) **inclusive of all the data**

3) **non-overlapping**

You Try: If your data ranges from 2 to 38, are the intervals below good (👍) or bad (👎)

1) 1-10, 11-20, 21-30, 31-40   👍 👎

2) 1-10, 10-20, 20-30, 30-40   👍 👎

3) 1-10, 11-15, 16-35, 36-40   👍 👎

4) 1-8, 9-16, 17-24, 25-32, 33-40   👍 👎

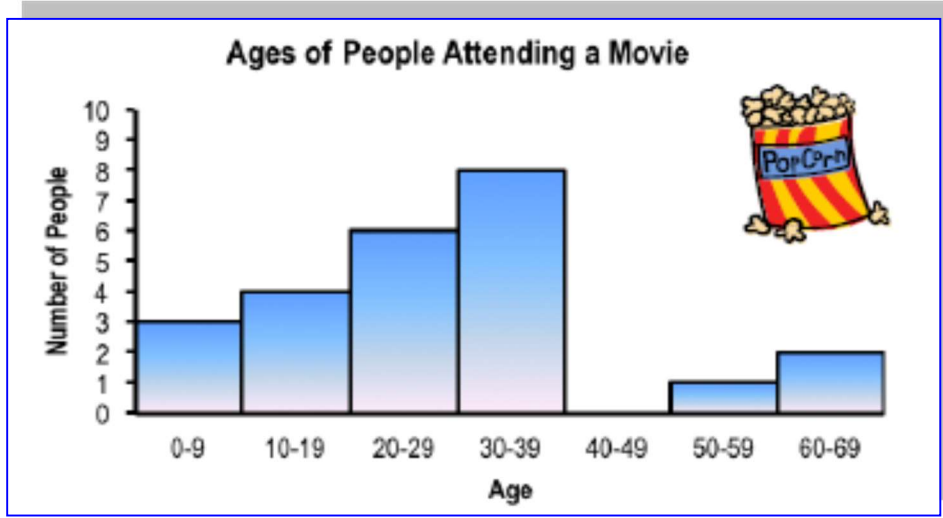5) 1-10, 11-20, 21-30   👍 👎

Histograms

A **histogram** is a bar graph used to display numerical data grouped in equal intervals.

Example:

The students of Monster High took a survey of the ages of everyone attending the "Ghouls Rule" Movie. The results are displayed in the histogram below.

Ages of People Attending a Movie

1) How many people from ages 10-19 attended the movie? _____

2) How many people aged 50 or over attended the movie? _____

3) How many kids younger than 20 attended the movie? _____

4) How many total people attended the movie? _____

5) What does the gap at the interval 40-49 mean? _____

_____

6) Can you tell whether a 25-year-old attended the movie? _____
Why or why not? _____

7) Why must the bars on a histogram always be touching (unless there is

a gap in data)? _____

Making a Histogram

Determining Intervals

Look at your data. What is the best way to break that data up?

Examples:

Data Range	Scale	Intervals
3 to 46	0 – 50	0-10, 11-20, 21-30, 31-40, 41-50
1 to 248	0 – 300	0-50, 51-100, 101-150, 151-200, 201-250
4.1 to 5.4	4 – 5.5	4-4.2, 4.3-4.5, 4.6-4.8, 4.9-5.1, 5.2-5.4
52 to 964		

Organize the data in a _____ _____ using the intervals.

Example:

Pages Read per Student Last Weekend				
78	15	40	19	188
50	122	96	37	102

The data ranges from _____ to _____. The scale will go from _____ to _____. We can use the interval of _____.

Make a frequency table:

Pages Read per Student Last Weekend				
NUMBER:	1-50	51-100	101-150	151-200
TALLY:	ⅲⅼⅼ	ⅼⅼ	ⅼⅼ	ⅼ
FREQUENCY:	5	2	2	1

Use the information in the frequency table on the previous page to create a histogram for the data.

Pages Read per Student Last Weekend				
NUMBER:	1-50	51-100	101-150	151-200
TALLY:	THL	II	II	I
FREQUENCY:	5	2	2	1

Title: _____

y

↑

x →

_____

Remember: Bars must _____. Label both _____.

Make a histogram for the following data:

How many songs are on your phone?

50, 33, 100, 202, 114, 44, 45, 203, 123, 176, 225, 15, 23, 111, 132, 156, 210, 43, 65, 66, 83, 90, 15, 140, 199, 134, 56, 14, 2

Number					
Tally					
Frequency					

Title: _____

y

↑

x →

_____

Remember: Bars must _____. Label both _____.