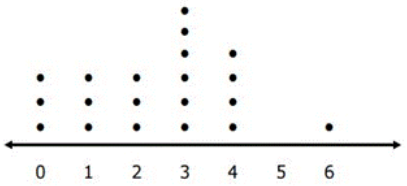
1. The students in one social studies class were asked how many brothers and sisters (siblings) they each have. The dot plot here shows the results.

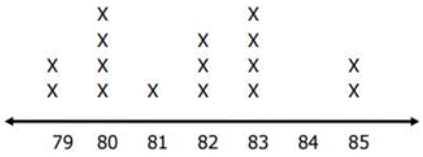


a. How many of the students have six siblings?

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.

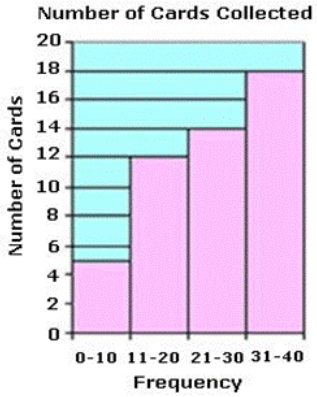


a. What is the range of the pulse rates?

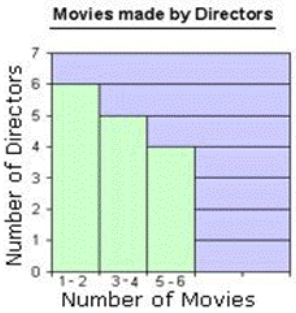
b. How many boys had a pulse rate over 81?

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

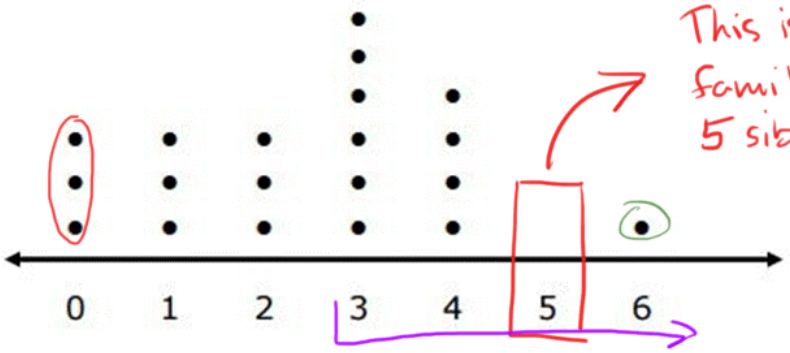
4. **John recorded the number of baseball cards collected by his friends, on a histogram. How many people were surveyed?**



3. **How many directors made 3 - 4 movies?**



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.



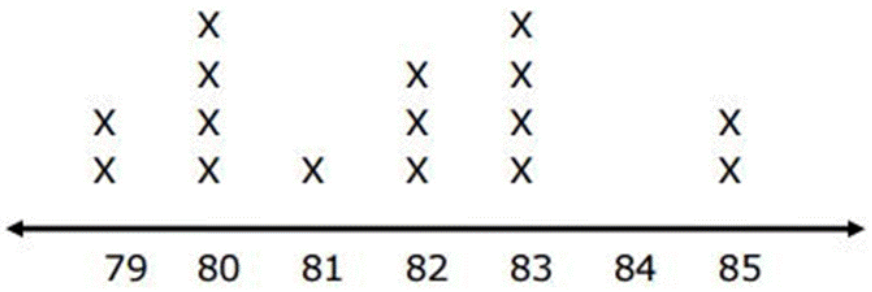
Not the answer to b. This is the number of families that have 5 siblings ⇒ None

a. How many of the students have six siblings? One

b. How many of the students have no siblings? Three

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

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

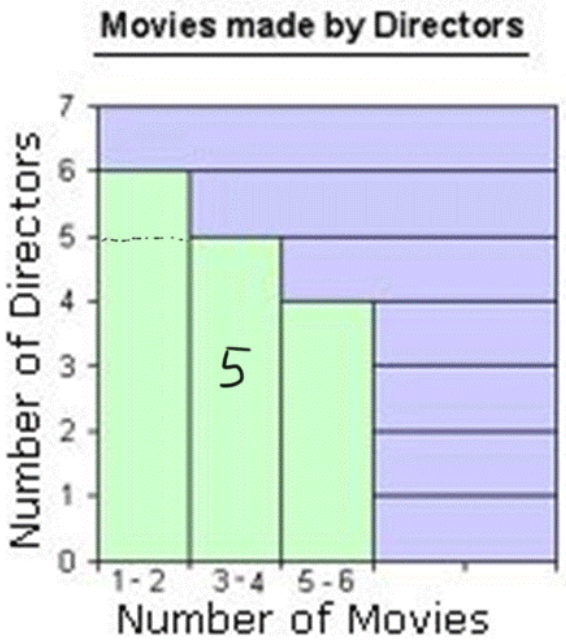


a. What is the range of the pulse rates? Range = max - min
6 = 85 - 79

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

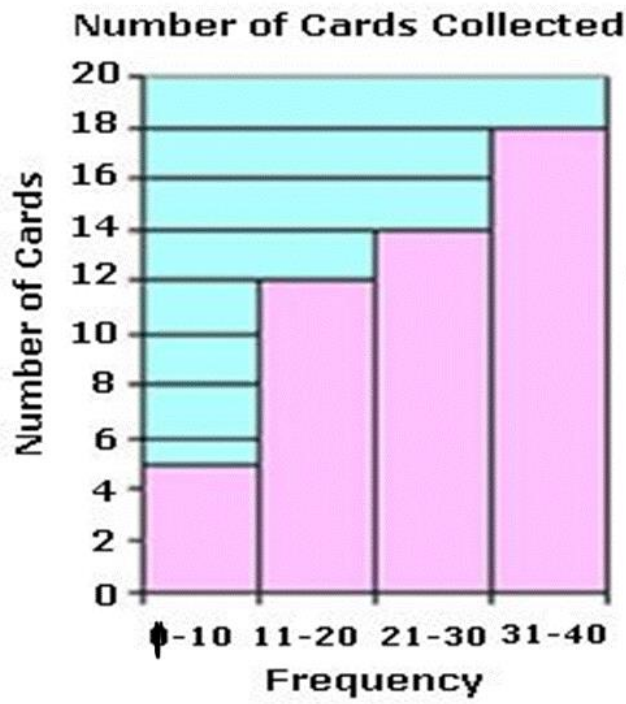
c. How many boys had a pulse rate of 83?
Four

3. How many directors made 3 - 4 movies?



five

4. John recorded the number of baseball cards collected by his friends, on a histogram. How many people were surveyed?



Min # = 1+11+21+31 =
= 64

Max# = 10+20+30+40
= 100

- u2d1 wksht
- u2d1 hw

HOMEWORK

U2D1 Name: _____ Period: _____

DATA REPRESENTATION

You have been given 2 sets of data below. The first set of data shows the weight of all current Miami Dolphins football players. The second set of data shows the temperature in Miami over the last 10 days.

Miami Dolphins' Weight

Name	Weight
Davis, Will	190
Finnegan, Cortland	190
Grimes, Brent	190
Sturgis, Caleb	190
Hartline, Brian	200
Taylor, Jamar	200
Wallace, Mike	200
Thomas, Michael	201
Landry, Jarvis	202
Seamster, Sammy	205
Wilson, Jimmy	205
Aikens, Walt	210
Delmas, Louis	210
Gibson, Brandon	210
Darkwa, Orleans	215
Matthews, Rishard	215
Moreno, Knowshon	218
Moore, Matt	220
Tannehill, Ryan	220
Williams, Damien	221
Miller, Lamar	224
Tripp, Jordan	240
Jenkins, Jelani	245
Wheeler, Philip	245
Hoskins, Harold	248
Fields, Brandon	249
McCain, Chris	250
Denney, John	252
Misi, Koa	252
Sheppard, Kelvin	252
Trusnik, Jason	252
Freeny, Jonathan	254

Miami Dolphins' Weight Continued

Clay, Charles	255
Sims, Dion	260
Wake, Cameron	262
Vernon, Olivier	268
Fede, Terrence	282
Shelby, Derrick	282
Satele, Samson	300
Odrick, Jared	302
Johnson, Anthony	304
Pouncey, Mike	305
Starks, Randy	305
Colledge, Daryn	308
Albert, Branden	310
Fox, Jason	310
Gaston, Bruce	310
Mitchell, Earl	310
Smith, Shelley	310
Turner, Billy	313
Thomas, Dallas	315
James, Ja'Wuan	318
Garner, Nate	320

Miami Temperature

Day	Temperature
1	89
2	89
3	91
4	92
5	92
6	92
7	93
8	93
9	94
10	92

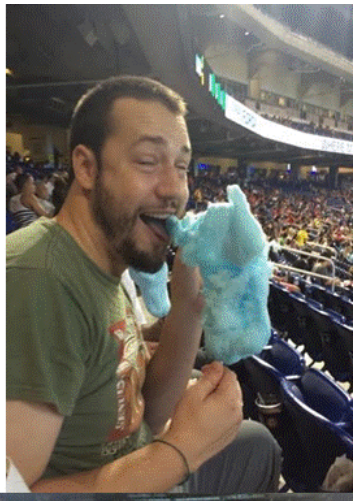
U2D1 Name: _____ Period: _____

1. For which set of data would it be more appropriate to use a dot plot? Explain your answer in complete sentences.

2. For which set of data would it be more appropriate to use a histogram? Explain your answer in complete sentences.

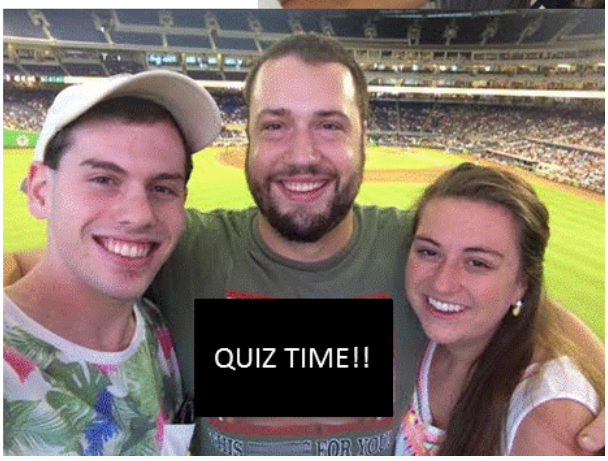
3. Create a dot plot and a histogram based on your answers to #1 and #2.

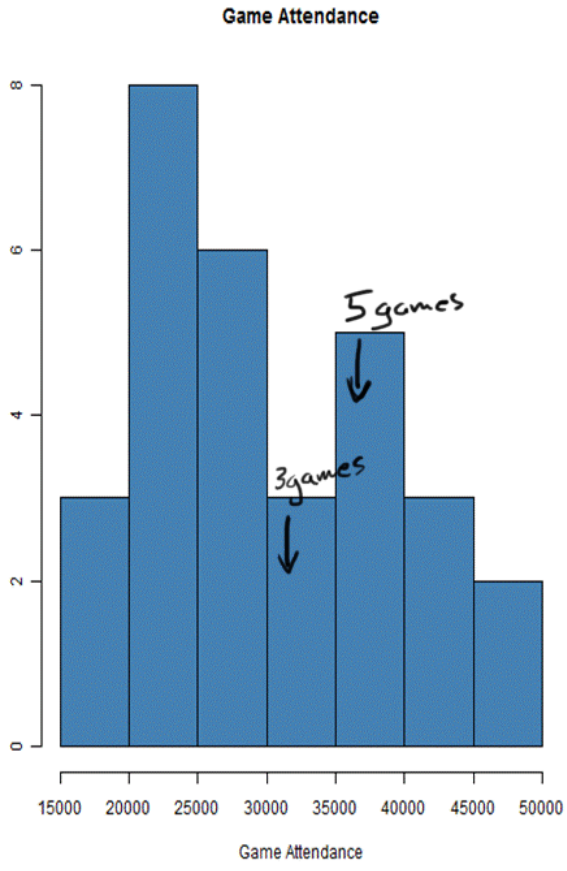
Baseball Quiz.

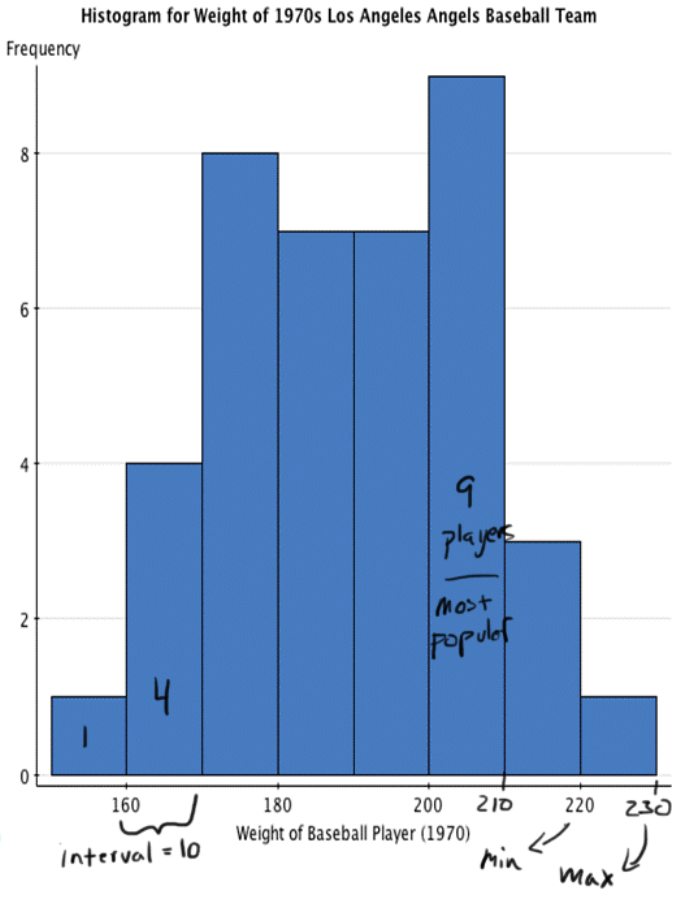


1. How many players are less than 170 pounds?
   5
2. Five games had an attendance of 35K to 40K fans.
3. How many games had 30,000 – 40,000 fans attend?
   8
4. How skinny could the fattest player actually be?
   220
5. What is the interval size for the weight graph?
   10
6. What range of weight is the most common?
   200-210
7. How fat could the fattest player actually be?
   230

Copy the questions… 3 min







Unit 2: Data

Essential Questions:

- How can I take a data set of many values and represent its essence with just one number?
- How can I summarize a data set of many values using statistics?
- How are the five number summaries similar/different?

Day 2/7: Measures of Center

u2d2 NOTES

The INDEX starts your notes for every Unit!

Index:

UNIT 2

u2d1 Dot Plots and Histograms..... Page 1

u2d2 Measures of Center ..... Page ___

u2d3 Box Plots..... Page ___

u2d4 I don't know yet..... Page ___

u2d5 Two-ways Frequency Tables ..... Page ___

u2d6 Two-ways Frequency Tables Review..... Page ___

u1d7 TEST..... Page ___

These are Abby's science test scores.

86 97 84

73 63 88

97 100 95

What is the MEAN?

How do we find it?

The **MEAN** is the AVERAGE of the data set.

The mean is found by

1. Adding all the values in the data set
2. Then dividing the sum by the number of values.

Lets find Abby's **MEAN** science test score?

Add all the values.

97
84
88
100
95
63
73
86
\+ 97

783

Divide the sum by the number of values.

783 ÷ 9 = 87

The mean is **87**

What is the MEDIAN?

How do we find it?

The **MEDIAN** is the number that is in the **MIDDLE** of a set of data

1. **Arrange the numbers in the set in order from least to greatest.**

2. **Then find the number that is in the middle.**

Arrange values from
least to greatest.

63 73 84 86 **88** 95 97 97 100

Find the number that is in the middle.

The median is **88.**

Half the numbers are <u>less</u> than the median.

Half the numbers are <u>greater</u> than the median.

Median

Sounds like
MEDIUM
Think **<u>middle</u>** when you hear median.

How do we find the MEDIAN when two numbers are in the middle?

1. Add the two numbers.

2. Then divide by 2.

Arrange values from least to greatest.

63 73 84 **88 95** 97 97 100

There are two numbers in the middle.

88 + 95 = 183

Add the 2 numbers.

Divide by 2.

183 ÷ 2

The median is **91.5**

What is the MODE?

How do we find it?

The **MODE** is the **piece of data that occurs most frequently** in the data set.

A set of data can have:

- **One mode**
- **More than one mode**
- **No mode**

Arranging values from least to greatest makes it easier to find the mode.

63 73 84 86 88 95 **97 97** 100

Find the number that appears more or most frequently.

The value 97 appears twice.

All other numbers appear just once.

97 is the MODE

MODE

A Hint for remembering the MODE…

The first two letters give you a hint… MOde

Most **O**ften

MODE
MOST OFTEN

Which set of data has **ONE MODE**?

A 9, 11, 16, 6, 7, 17, 18

B 18, 7, 10, 7, 18

C 9, 11, 16, 8, 16

mode = 16

Which set of data has **NO MODE**?

A) 9, 11, 16, 6, 7, 17, 18

Mode = None

B) 18, 7, 10, 7, 18

C) 13, 12, 12, 11, 12

Which set of data has **MORE THAN ONE MODE**?

A) 9, 11, 16, 8, 16

B) 9, 11, 16, 6, 7, 17, 18

C) 18, 7, 10, 7, 18

Mode = 18 and 7

What is the RANGE?

How do we find it?

The RANGE is the **difference between the lowest and highest values.**

largest number
– smallest number
RANGE

Arranging values from least to greatest makes it easier to find the RANGE.

63 73 84 86 88 95 97 97 100

Subtract the lowest value from the highest.

100
-63
37

34 is the RANGE or spread of this set of data

What is the RANGE of this set of data?

48 71 84 86 88 97 99

99
-48
51

What is the RANGE of this set of data?

15 17 33 46 48 67 85

85
-15
70

What is the RANGE of this set of data?

Example 3

267

119

357

329

401

227

483

What is the RANGE of this set of data?

119 227 267 329 357 401 483

$$\begin{array}{r} 483 \\ -119 \\ \hline 364 \end{array}$$

Mean →

This one requires more work than the others.

Median →

Right in the MIDDLE.

Mode →

This one is the easiest to find— Just L**OO**K.

Range

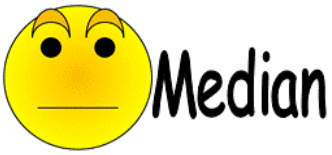
This one is just how wide or stretched your data is.

Example 4

Find the….

Range

Mean



Median

Mode

9, 10, 10, 13, 13

Example 4.

$$\frac{9+10+10+13+13}{5} = \frac{55}{5} = 11 = \text{mean}$$

Mode = 10, 13

Range = 13 − 9 = 4

Median = 10

Example 5

Find the....  Range

 Mean  Median  Mode

8, 8, 9, 10, 10, 12, 12, 13, 17

Example 5.

$$\text{mean} = \frac{8+8+9+10+10+12+12+13+17}{9} = \frac{99}{9}$$

mode = 8, 10, 12

median = 10

Range = 17 − 8 = 9

Example 6

Find the....  Range

 Mean  Median  Mode

13, 82, 79, 54, 60, 48

Example 6.

$$\text{Mean} = \frac{13+48+54+60+79+82}{6} = \frac{336}{6} = 56$$

$$\text{Median} = \frac{54+60}{2} = \frac{114}{2} = 57$$

Mode = None

Range = 82 − 13 = 69

Example 7

Find the....  Range

 Mean  Median  Mode

69, 71, 31, 48, 31

Example 7.

$$\text{mean} = \frac{31+31+48+69+71}{5} = \frac{250}{5} = 50$$

median = 48

Mode = 31

Range = 71 − 31 = 40

Example 8

Find the....  Range

 Mean  Median  Mode

40, 48, 69, 69, 29

Example 8.

$$\text{Mean} = \frac{29+40+48+69+69}{5} = \frac{255}{5} = 51$$

Median = 48

Mode = 69

Range = 69 − 29 = 40