

## Math Packet Grade 6 Bridge:

Week 6: May 4-8 Name \_\_\_\_\_ Period: \_\_\_\_\_

Monday- Read over Study Guide: Statistics (enclosed), Go to Class Link, click on myhrw, p. 450, watch IMPORTANT Math on the Spot video on measures of central tendency.	Complete sheet 5.8
Tuesday- Go to myhrw, view Math on the Spot videos on p. 463, 464 and 465.	Complete p. 191
Wednesday- Read about dot plots/histograms, READ p. 470-472 and p. 478, Go math pages	Complete 16-4/16-4 Sheets
Thursday- Identify Statistical Questions- questions that have many different, or <b>variable</b> , answers. For example: how many siblings do students in this class have? is a <b>statistical</b> question.	Complete p. 469, Go Math page
Friday- Review and Assess	Ready to Go On? Complete p. 483, # 1-7

## Study Guide: *Statistics*

\*Find Mean: add up the numbers in the data set and divide by the number of items.

\*Find Median: list numbers in order from smallest to largest.

The middle number is the median. If there are two middle numbers: add them up and divide by two.

\*Find Mode: the number/s that occur the most in a set of data.

Find Range: subtract the smallest number from the largest number in data set.

Outlier: a data value that is much greater or much less than the others in a data set.

When should I use the above\* measures of central tendency?

Use mode if there are a LOT of the same number in your data set.

Use mean if the numbers are fairly close together.

Use median if there is an OUTLIER.

Name \_\_\_\_\_

# Range, Mean, Median, and Mode

USE WHAT YOU KNOW

Complete the table.

\*  
Put numbers in order (see below)

	Data	Range	Mean	Median	Mode
1.	37, 36, 76, 84, 37	_____	_____	_____	_____
2.	87, 98, 91, 75, 89	_____	_____	_____	_____
3.	68, 85, 70, 57, 88, 88	_____	_____	_____	_____
4.	96, 85, 52, 84, 85, 83, 40	_____	_____	_____	_____
5.	90, 94, 65, 90, 84, 94, 85	_____	_____	_____	_____
6.	82, 56, 46, 67, 89, 97, 56, 67	_____	_____	_____	_____

## Mixed Applications

7. The test scores for the last test in Mrs. Kwan's class were 84, 73, 91, 60, 76, 78, 74, 79, 76, and 89. What is the mean of the scores? What is the range of the scores?

8. The student who earned a 60 on the test transferred to another class. If Mrs. Kwan drops the 60, what is the mean of the remaining scores? What is the range?

mean- \_\_\_\_\_ range- \_\_\_\_\_

mean- \_\_\_\_\_ range- \_\_\_\_\_

Put numbers in order from above.

- \* 1) \_\_\_\_\_
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_
- 4) \_\_\_\_\_
- 5) \_\_\_\_\_
- 6) \_\_\_\_\_

### Reflections

9. Refer to the data from question number 5. These are the test scores from a group of students on the most recent test. What can you conclude about their scores? \_\_\_\_\_

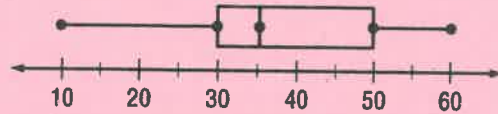
10. Refer to the data from question number 1. These are high temperatures from a particular city in February. What can you conclude about these temperatures? \_\_\_\_\_

**Reteach**

Tues

**Box-and-Whisker Plots**

A **box-and-whisker plot** is a diagram that is constructed using the median, quartiles, and extreme values. A box is drawn around the quartile values, and the whiskers extend from each quartile to the extreme values.



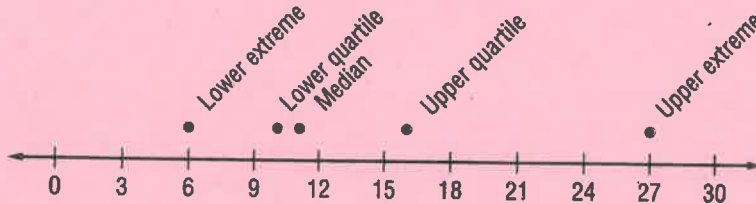
**Example**

The list below shows the number of model airplanes owned by the members of the aviation club. Draw a box-and-whisker plot of the data.

- 6, 8, 10, 10, 10, 11, 12, 14, 16, 18, 27

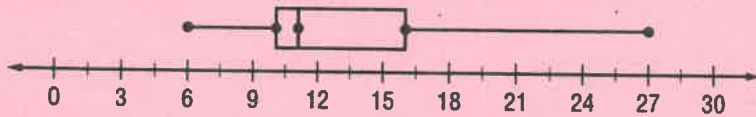
**Step 1** Order the numbers from least to greatest. Then draw a number line that covers the range of the data.

**Step 2** Find the median, the extremes, and the upper and lower quartiles. Mark these points above the number line.



**Step 3** Draw the box so that it includes the quartile values. Draw a vertical line through the median value. Extend the whiskers from each quartile to the extreme data points.

**Numbers of Model Airplanes Owned**



**Exercises**

\* List numbers in order first. Circle the median. Find LQ and UQ.

Draw a box-and-whisker plot for each set of data.

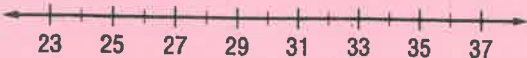
1. {4, 7, 5, 3, 12, 6, 5}



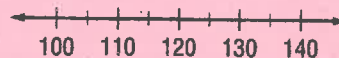
2. {13, 8, 17, 10, 6, 11, 18}



3. {23, 36, 28, 34, 30, 29, 30, 28, 34}



4. {108, 130, 110, 104, 106, 120, 140, 122, 114, 104}



**LESSON**  
**16-4**

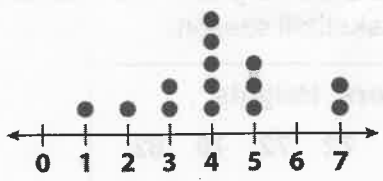
**Dot Plots and Data Distribution** *Wed.*  
**Success for English Learners**

A **dot plot** provides a visual way to display data.

**Problem 1**

The data below is shown in the dot plot at the right.

Summer Hours I Spent  
Horseback Riding  
  
1, 7, 4, 3, 5, 4, 2,  
  
7, 4, 4, 3, 5, 5, 4

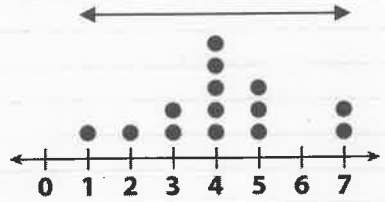


Summer Hours I Spent  
Horseback Riding

**Problem 2**

You can describe the spread, the center, and the shape of a dot plot.

**Spread:** Range or difference between least and greatest values



Measures of **center**:

**Mean:**  $\frac{\text{Sum of data values}}{\text{Number of data values}}$

**Median:** Middle value

The **shape** of this dot plot is **symmetrical**, which means there are about the same number of dots on one side of the center of the range as on the other side of center.

1. How would you describe the spread of the dot plot?

\_\_\_\_\_

2. Find the mean of the data. \_\_\_\_\_

3. Find the median of the data. \_\_\_\_\_

4. What does it mean if the shape of a dot plot is **not** symmetrical?

\_\_\_\_\_

*Wed.*

**LESSON**  
**16-5**

# Histograms

## Practice and Problem Solving: A/B

Use the data in the chart and the description below to complete Exercises 1–2.

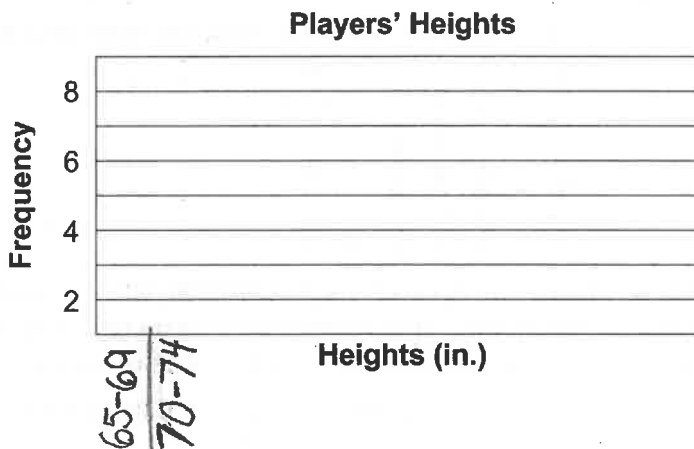
The data set lists the heights of the Houston Rockets players during the 2011–2012 basketball season.

Players' Heights						
81	80	79	72	72	78	82
80	80	76	87	65	79	82
80	79	81	71	77		

- Complete the frequency table. Use an interval of 5.
- Complete the histogram.

List intervals by 5's

Players' Heights	
Heights (in.)	Frequency
65–69	
<u>70–74</u>	



**Solve.** Use the histogram or the set of data. Tell which you used.

- Find the range, the median, and the mean of the players' heights.
  - range
  - median
  - mode

\_\_\_\_\_

- Based on this data, what do you think is the average height of players in the National Basketball Association? Explain how you decided on your answer including which display of data you used.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



# LESSON 16.4 Dot Plots and Data Distribution

 FL 6.SP.2.4

Display numerical data in plots on a number line, including dot plots....  
Also 6.SP.1.1, 6.SP.1.2, 6.SP.2.5c, 6.SP.2.5d



## ESSENTIAL QUESTION

How can you summarize and display numeric data?

### EXPLORE ACTIVITY



FL 6.SP.1.1

## Variable Data and Statistical Questions

The question "How much does a typical cat weigh?" is an example of a statistical question. A **statistical question** is a question that has many different, or variable, answers.

*(Statistical)*



**A** Decide whether each of the situations below could yield variable data.

1. Your sister wants to know the typical weight for an adult cat.  
\_\_\_\_\_
2. You want to know how tall your friend is. \_\_\_\_\_
3. You want to know how far your house is from school. \_\_\_\_\_
4. A car owner wants to know how much money people usually pay for a new tire. \_\_\_\_\_
5. How many students were in line for lunch at the cafeteria today at 12:30? \_\_\_\_\_

*\* typical means "normal"*

**B** For which of the situations in part **A** can you write a statistical question? Write questions for these situations.

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### Reflect

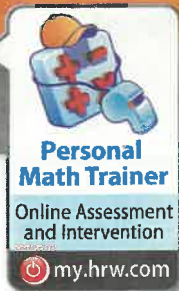
1. Choose one of the questions you wrote in part **B**. How might you find answers to this question? What units would you use for the answers?

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# Ready to Go On?



## 16.1 Measures of Center

1. Find the mean and median of these data: 2, 5, 9, 11, 17, 19. \_\_\_\_\_

## 16.2 Mean Absolute Deviation

2. Find the range of the above data from problem #1. \_\_\_\_\_

## 16.3 Box Plots

3. Make a box plot for the data set.

36	42	44	52	61	70	78
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## 16.4 Dot Plots and Data Distribution

A baseball team scored the following number of runs over a 10-game period:  
6, 6, 8, 5, 4, 6, 4, 3, 8, 4

4. Make a dot plot for the data. 5. Find the mean, median, and range.



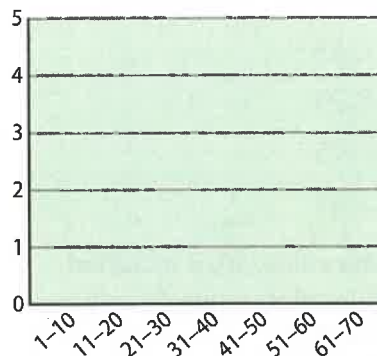
\_\_\_\_\_

\_\_\_\_\_

## 16.5 Histograms

6. Make a histogram for the data set.

23	45	62	19
48	10	39	54
39	16	48	12
25	32	18	4



### ESSENTIAL QUESTION

7. How can you represent and summarize data in a dot plot?

\_\_\_\_\_

\_\_\_\_\_