

Student Name(s) _____ Date _____

Round and Round

A. Input your class data from Transparency 2. (Use the table that starts in row 6.)

Sketch the resulting scatterplot.

B. For each statement, choose the scatterplot(s) that best represents the situation.

_____ 1. After the 1st attempt, most students were able to increase the number of revolutions on their 2nd attempt.

_____ 2. After the 1st attempt, most students made fewer revolutions on their 2nd attempt.

_____ 3. The number of revolutions on the 1st attempt is about the same as the number of revolutions on the 2nd attempt.

_____ 4. There is not a strong relationship between the number of revolutions made in the two attempts.

_____ 5. Most students did considerably better on their 2nd attempt than on their 1st attempt.

_____ 6. Based on the data you have from your class, which scatterplot would look most like yours? Explain.

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Round and Round (continued)

7. Now that you have analyzed possible scenarios for scatterplots A, B, and C, write a statement that describes the relationship between the 1st attempt and 2nd attempt for your class.

8. Use formulas to calculate the mean, median, and mode of the data for the 1st attempt and for the 2nd attempt. Record the results below.

	1st attempt	2nd attempt
mean		
median		
mode		

9. Which measure of central tendency best describes the number of revolutions made on the 1st attempt and 2nd attempt? Explain your choice.

Baby Names

(based on data from Social Security card applications)

Given: Some baby names are more popular (occur more often) than others. The list of the most popular baby names changes from year to year. While some names are used less over time, others remain popular.

Question: Over the last 40 years, do you think boy names or girl names have been less "trendy"? In other words, do you think children in your generation are more likely to have the same names as adults in your parents' generation if they are boys or girls? Today you will research to compare the ranking of the most popular names in the year 1965 to the ranking of those names in the year 2004 (a span of 40 years).

Directions:

1. Go to the website below to determine the top 10 names for boys and girls in the year 1965.
2. Record the names missing in the tables below.
3. Look up ranks missing for each name for the year 2004 and add that data to the chart. (The database lists the top 1000 names. Use a rank of 1001 if a name is not included.)

<http://www.ssa.gov/OACT/babynames/>

BOYS		
Name	1965 Rank	2004 Rank
	1	
John	2	18
David	3	
James	4	17
	5	
William	6	
	7	113
Richard	8	
Thomas	9	37
Jeffrey	10	

GIRLS		
Name	1965 Rank	2004 Rank
	1	
Mary	2	
	3	154
Kimberly	4	
Susan	5	565
Patricia	6	
Donna	7	781
	8	
Cynthia	9	
Angela	10	105

Baby Names

4. Looking at the data in the table, what do you notice about the change in rank of the top 10 names for boys versus the change in rank of the top 10 names for girls over the last 40 years?

5. Looking at the data in the scatterplot, explain how any observations you made from the table in #4 are reflected in the scatterplot.

6. Calculate the mean rank of the given boy names for 2004 and girl names for 2004. How many boy names and how many girl names were more popular than the mean rank?

7. Calculate the median rank of the given boy names for 2004 and girl names for 2004. How many boy names and how many girl names were more popular than the median rank?

8. Calculate the range in the rankings of the given boy names for 2004 and girl names for 2004. How does the range value for the boys compare to that of the girls? What does this mean?

9. Determine whether the mean or median best describes the data. Position the lines below the scatterplot (solid for boys and dashed for girls) on the scatterplot to represent these measurements. What does the position of the lines on the scatterplot emphasize about the relationship between how the popularity of the top ten names for boys and girls has changed from your parents' generation to now?

10. Describe the relationship between the points on the scatterplot and the lines you drew in #9 for the boy names and the girl names. What does this mean?

What's In A Name?

1. Access the website <http://www.ssa.gov/OACT/babynames/> . In an earlier activity we compared the ranking of the top ten names of your parents' generation (1965) to the ranking of those names today to answer the question about how the popularity of names stands the test of time.
 - a. Consider the following set of questions.

How has the number of people having the most popular boy name changed over the last 10 years? How many people do you predict might have the most popular name in 2010?
 - b. Fill in the table using the website.

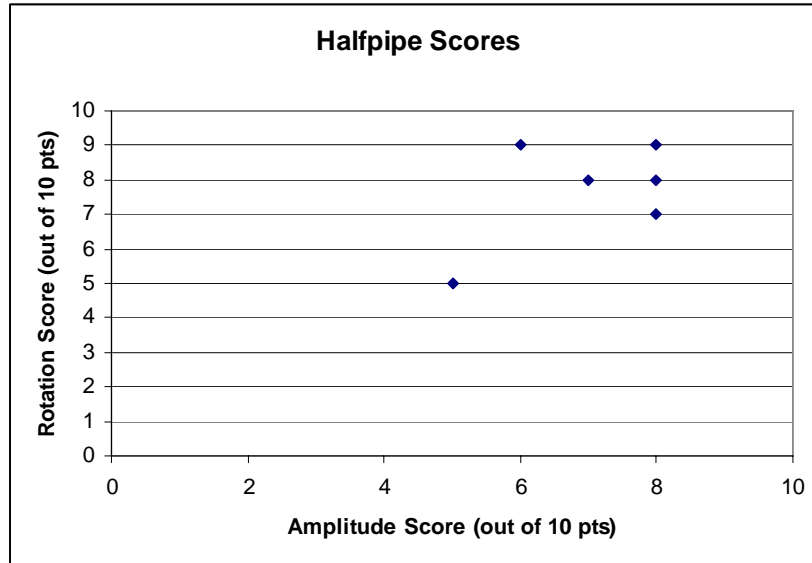
?	?

- c. Use the TI-73 to create a scatterplot.
- d. Draw a trendline if appropriate.
- e. Calculate the mean, median, and range of your data.

Minimum	
Maximum	
Mean (average)	
Median	
Mode	
Range	

- f. Respond to the questions in part a. Justify your answers using the scatterplot, trendline, and/or statistical measurements to support your conclusions.

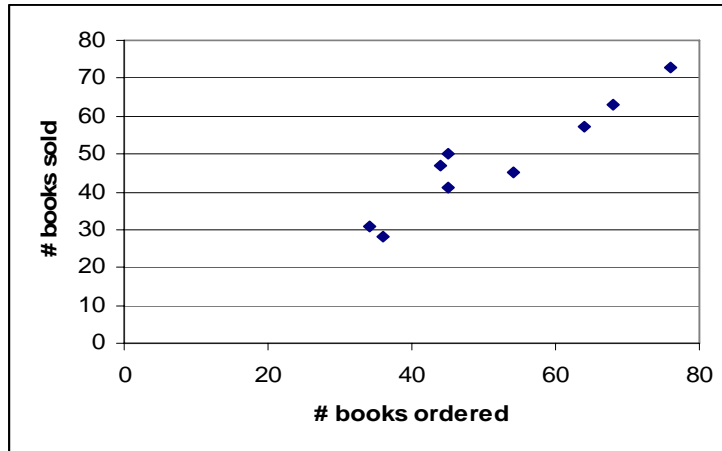
1. The scatterplot below compares the score for amplitude (height) to the score for rotations (spins and flips) for six skateboarders at the weekend meet.



- Which of the following statements would be supported by the scatterplot?
- A. As the score for amplitude increases, the score for rotations tends to increase.
 - B. As the score for amplitude increases, the score for rotations tends to decrease.
 - C. As the score for rotations increases, the score for amplitude tends to decrease.
 - D. The score for rotations tends to be the same as the score for amplitude.

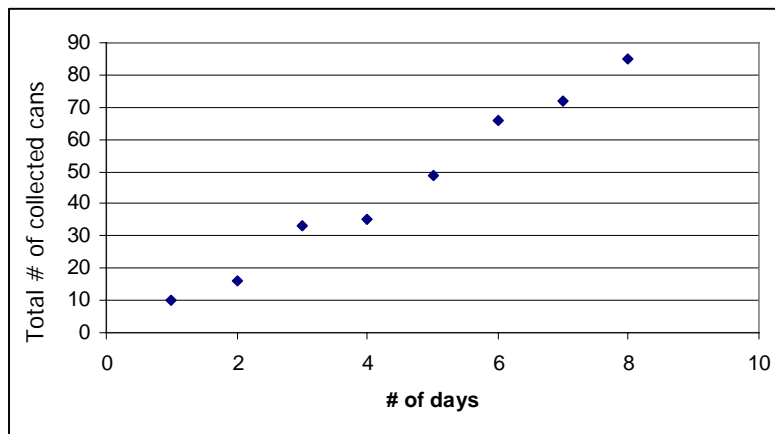
2. Which relationship, when graphed on a scatterplot, would **not** be described as having a positive trend?
- A. Height of a student compared to his/her weight
 - B. The amount of money earned babysitting compared to the number of hours spent babysitting
 - C. The number of miles driven compared to the amount of gas in the tank of the car
 - D. All of the above relationships have a positive trend.

3. The following scatterplot compares the number of books ordered through the school fund raiser to the number of books that were actually paid for and sold.



If the mean(average) number of books ordered is about 52, estimate the mean(average) number of books sold based on the trends in data in the scatterplot.

- A. greater than 49
 - B. between 47 and 49
 - C. between 45 and 47
 - D. less than 45
4. Ms. Smith's class is collecting aluminum cans for a recycling project as shown in the scatterplot below.



At this rate, about how many days will it take to collect 150 cans?

- A. 15 days
- B. 10 days
- C. 20 days
- D. 150 days