Name \_\_\_\_\_ Real World Math Date \_\_\_\_\_ Period \_\_\_\_\_

## Unit 5 Quiz #1 REVIEW Statistical Measurements

For questions 1-8, give a definition for each statistical measure:

- 1. mean  $(\bar{x})$ :
- 2. median (med):
- 3. mode:
- 4. range:
- 5. quartiles ( $Q_1$ , med,  $Q_3$ ):
- 6. interquartile range:
- 7. standard deviation ( $\sigma$ ):
- 8. percentile:

9. A class of Math students were asked how many pets they have. Here are the results:

Number of	a. How many Math 3 students were in this class?			
<u>Pets</u>				
4	b. Write the data in order:			
2				
7				
3	c. Find each of the following statistical measurements:			
1	(if necessary, round to the nearest tenth)			
4				
0	→ mean:			
3				
2				
3	→ median:			
0				
2				
0	→ mode:			
3				
5				
2	→ range:			
1				
0				
3	→ Interquartile range:			
1				
	→ standard deviation:			

d. Which measure of central tendency (mean, median, or mode) would most accurately represent this data? Why?

e. Using this data, what is the percentile rank of a household with 2 pets?

10. Two endings are filmed for a movie that will be coming out in 2012. The producers need to decide which ending will sell the most tickets. After watching the two movie endings, 200 people (100 men and 100 women) were asked the following questions:

- 1. Which ending did you prefer? #1 OR #2
- 2. Would you go see this in a movie theater? Yes OR No
- 3. What is your age range? 20 and Under OR 21 and Older
- 4. How many movies do you see each year? Fewer than 10 OR More than 10
- 5. What is your gender? Male OR Female

Possible	Male	Female	Total	<u>% of Total</u>
<u>choices</u>	<u>responses</u>	<u>responses</u>	<u>Responses</u>	<u>Respondents</u>
Ending #1	64	44		
Ending #2	36	56		
Yes	82	48		
No	18	52		
20 and Under	57	71		
21 or Older	43	29		
Fewer than 10	55	57		
More than 10	45	43		

Here is the data they collected:

a. Complete the Total column and the Percent of Total Respondents column for each response in the table (If necessary, round to the nearest tenth.)

b. Which ending did most people prefer? Is this result significant?

c. If the movie producers want to appeal to women, which ending should they use? Why?

d. If the movie producers want to appeal to people under the age of 20, how should they reorganize the data?