Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Accelerated Coordinate Algebra

Unit 6 Data: Distributions

**Answer the questions that accompany each graph to begin your understanding of the story behind the data.**

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| Transportation officials collect data on flight delays (the number of minutes past the scheduled departure time that a flight takes off).  Consider the dot plot of the delay times for sixty BigAir flights during December 2012. | 1. What do you think this graph is telling us about the flight delays for these sixty flights?  2. Can you think of a reason why the data presented by this graph provides important  information? Who might be interested in this data distribution?  3. Based on your previous work with dot plots, would you describe this dot plot as representing a symmetric or a skewed data distribution?  (Recall that a skewed data distribution is not mound shaped.) Explain your answer. |
| A random sample of eighty viewers of a television show was selected. The dot plot below shows the distribution of the ages (in years) of these eighty viewers. | 4. What do you think this graph is telling us about the ages of the eighty viewers in this sample?  5. Can you think of a reason why the data presented by this graph provides important information? Who might be interested in this data distribution?  6. Based on your previous work with dot plots,  would you describe this dot plot as representing  a symmetric or a skewed data distribution?  Explain your answer. |
| The following histogram represents the age distribution of the population of Kenya in 2010. | 7. What do you think this graph is telling us about  the population of Kenya?  8. Why might we want to study the data  represented by this graph?  9. Based on your previous work with histograms,  would you describe this histogram as  representing a symmetrical or a skewed  distribution? Explain your answer. |
| The following histogram represents the age distribution of  the population of the United States in 2010. | 10. What do you think this graph is telling us about  the population of the United States?  11. Why might we want to study the data represented by this graph? |
| Thirty students from River City High School were asked how many pets they owned. The following box plot was prepared from their answers.  **Boxplot of Number of Pets** | 12. What does the box plot tell us about the number of pets owned by the thirty students at River City High School?  13. Why might understanding the data behind this  graph be important? |
| Twenty-two juniors from River City High School participated in a walkathon to raise money for the school band. The following box plot was constructed using the number of miles walked by each of the twenty-two juniors. | 14. What do you think the box plot tells us about the number of miles walked by the twenty-two  juniors?  15. Why might understanding the data behind this  graph be important? |

16. What are reasons that a scheduled airline flight might be delayed?

17. What are some of the favorite television shows of the students in your class? List some of the most memorable commercials that are shown during those shows. In your opinion, do the commercials connect with the viewers?

18. You walk into a store. You estimate that most of the customers are between fifty and sixty years old. What kind of store do you think it is?

19. If you asked students in your class how many pets they owned, what do you think would be a typical value?

20. You are selected to take a trip to Kenya. Do you think you will meet several people ninety or older? Why or why not?