Dog Days or Dog Years?

DogDaysorDogYears.tns

Name _____

Class _____

Problem 1 – Ordered Pairs

Use page 1.2 to determine Spot's age in human years.

1. Describe the ordered pair in words for Spot's age conversion.

2. List 5 of the numerical pairs.

Claim: Each dog year is equal to 7 human years.

3. What would 5 of the ordered pairs be for the claim? What would be the function?

4. How do the two sets of ordered pairs compare? Does Spot's age support the claim? Explain your reasoning.

Problem 2 – Table of Values and Scatter Plot

View the table of values and scatter plot representing Spot's age and his equivalent human age on page 2.2.

5. At what dog age does the relationship to human years change? How did you determine this?

6. Using the table, determine by how much the human age increases for every dog year for the first part and for the second part of the scatter plot.

7. Now use the table to determine a function for the first part and a function for the second part.

Go back to page 2.2 and graph your functions with the scatter plot. Do your functions go through all of the points?

8. Use the graph to predict the human age of a dog that is 10 years old.

9. What is the domain and range for Spot's age?

10. Based on the ordered pairs, table, and scatter plot, a dog is always 7 years old for every 1 year of human age.

□ True □ False

Extension/Homework – Cat Age Converter

Use page 3.2 to produce the same type of data for cats as you did above for dogs. Plot enough points so that you can look for patterns and perhaps write an equation or even a piecewise function for it. Make some predictions for cats' ages that you did not calculate.

Write a sentence or two to describe the similarities or differences between the cats' ages and dogs' ages. Your analysis could convince someone to give up that 7 year myth—be a Mythbuster!