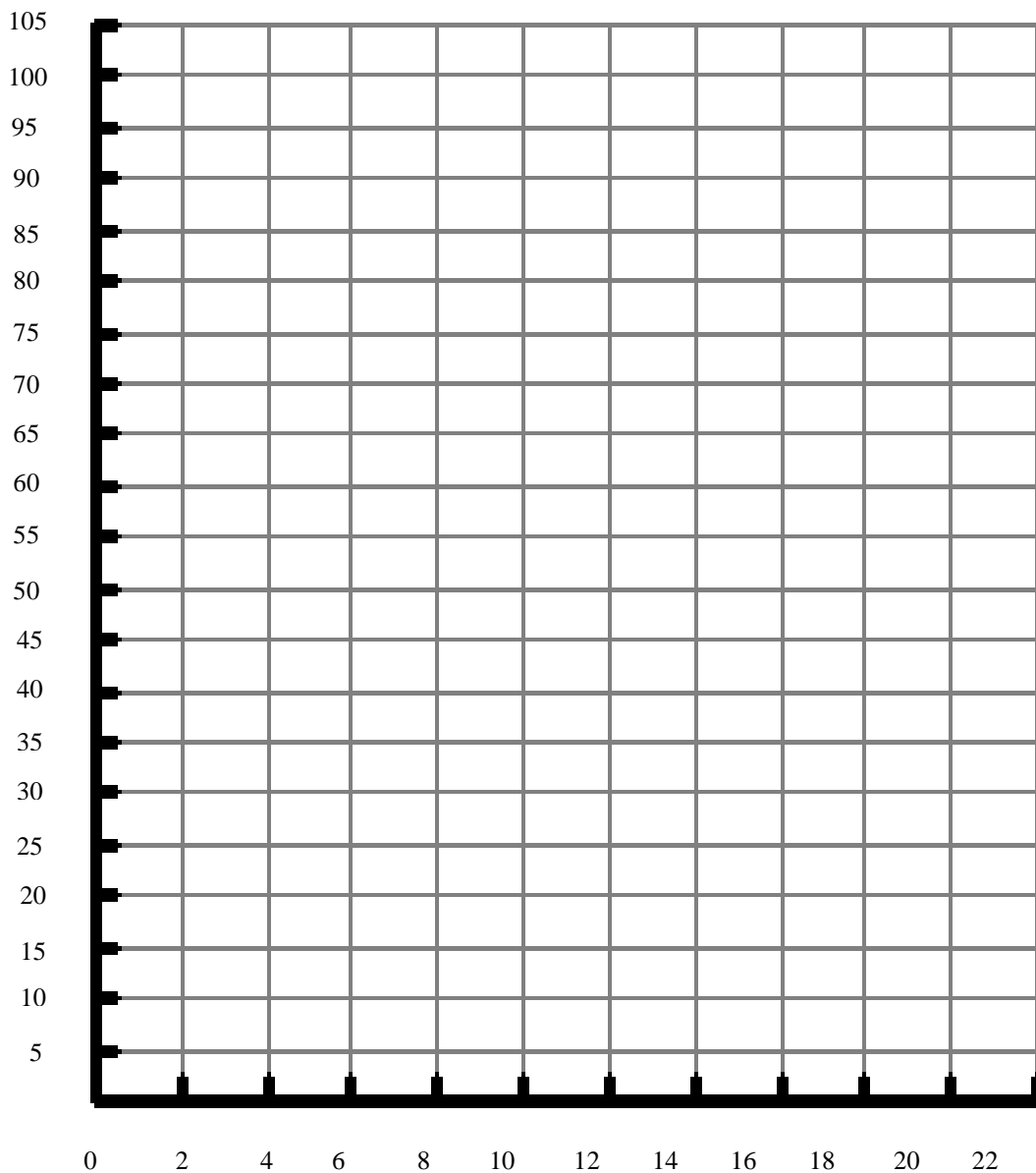


# Correlation and Best Fitting Lines

An old myth says 1 dog year equals 7 human years, but that comparison is not accurate. An approximate comparison of ages is shown in the table:

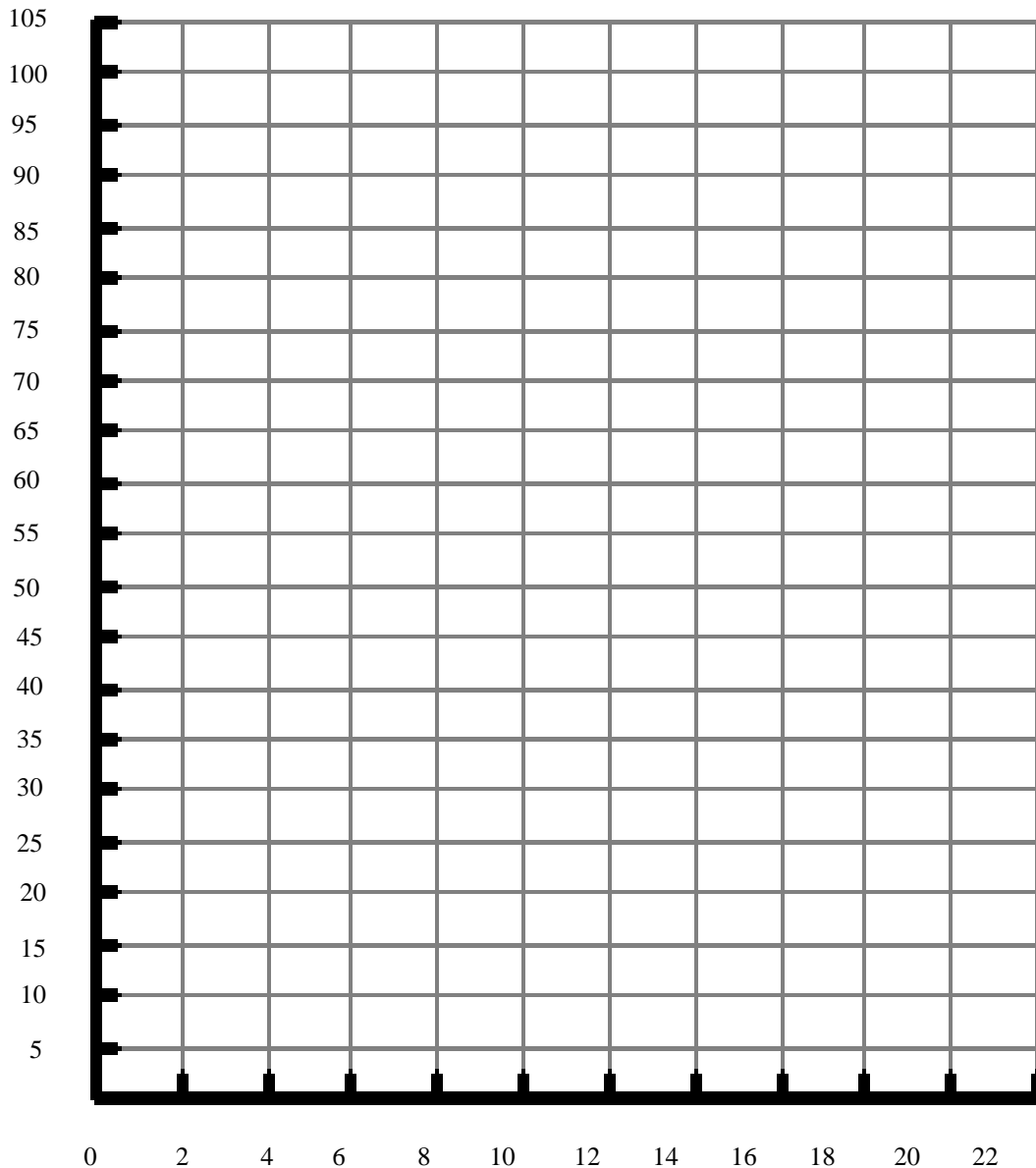
Age of a Cat or Dog	Approximate Human Age
.25 years	5 years
.5 years	10 years
1 year	15 years
2 years	24 years
4 years	32 years
6 years	40 years
8 years	48 years
10 years	56 years
14 years	72 years
18 years	90 years
20 years	94 years
21 years	101 years



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1. Plot the points on the graph. Using your calculator, determine the model for this data..

Linear Regression equation: \_\_\_\_\_

2. What does the slope mean in this equation?
3. What is the correlation coefficient? Describe the strength and direction of the relationship

Correlation Coefficient: \_\_\_\_\_

4. Using the line of best fit equation, predict the equivalent age of the animal who is:
  - a. 12 years old
  - b. 16 years old
  - c. 3 years old
  - d. 22 years old
5. The documented world's oldest dog was named Bluey from Australia who died when he was 29.42 years old. Find Bluey's approximate equivalent human age.

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