Name: _____ Date: _____

Class: _____ Teacher: _____

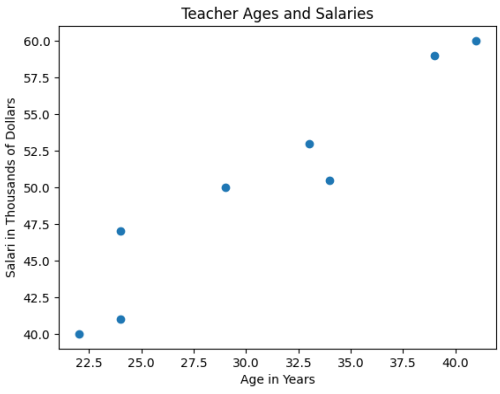
Math Mini Quiz 3

This Mini Quiz, we're going to explore the math concepts that you've learned so far in this unit. This assignment should take you about **15 minutes**.

1) Below, there are two different datasets. One makes more sense to represent as a scatter plot and the other makes more sense to represent in a two-way table. In the Space below, decide which dataset should go with which type of chart and make that chart.

Teacher ages and the salaries: Darcy is 29 years old makes $50,000; Vanessa is 33 years old makes $53,000; Rosa is 42 years old and makes $60,000; Jimmy is 24 years old: $41,000; Jenna is 22 years old makes $40,000; Fatima is 34 years old and makes $50,500; Joseph is 25 years old and makes $47,000; Maya is 39 years old and makes $59,000.
Teacher dietary preferences and astrology signs Darcy is a vegetarian and a Scorpio; Vanessa has no dietary restrictions and is a Capricorn; Rosa is a vegetarian and a Capricorn; Jimmy is a vegetarian and a Ccorpio; Jenna has no dietary restrictions and is a Capricorn; Fatima has no dietary restrictions and is a Capricorn; Joseph is a vegetarian and a Scorpio; Maya is a vegetarian and a Capricorn.

	No Dietary Restrictions	Vegetarian	Total
Capricorn	3	3	6
Scorpio	0	2	2
Total	3	5	8



(yes, there's a back, don't forget it)

2) Why did you choose to make the charts the way you did?

Teacher age and salary represents two numerical values (age and salary) for each data point (each teacher). Scatter plots are the best equipped for analyzing datasets with two values. Teacher sign and diet on the other hand represents two categorical values (Scorpio/Capricorn and vegetarian/no). These types of data sets are best suited for two-way tables.

3) Think of the correlation coefficient between teacher ages and salaries. Give a rough estimate of the value and explain why you chose it.

The correlation coefficient should be: positive, and between 0.5 and 1.
We know it is positive because as age increases, so does the salary. We also know it should be closer to 1 because the correlation seems strong. The points move up at what seems to be a pretty consistent rate, looking roughly like a straight line.

4) (a) Of the Scorpios, what percentage are vegetarians? (b) Of the Capricorns, what percentage are vegetarians? (c) Are there more Scorpio vegetarians or more Capricorn Vegetarians? Is a higher percentage of Scorpios or Capricorns vegetarian? (d) Of the total population, what percentage is vegetarian?

(a) Vegetarian Scorpios / Total Scorpios = 2 / 2 = 100%
(b) Vegetarian Capricorns / Total Capricorns = 3 / 6 = 50%
*(c) There are 3 Capricorn vegetarians and 2 Scorpio vegetarians, so there are more Capricorn vegetarians. However, 100% of Scorpios are vegetarians while 50% of Capricorns are, meaning there's a higher **percentage** of Scorpios who are vegetarians.*
(d) Total Vegetarians / Total number of people = 5 / 8 = 62.5%

The end, good job :)