

1. (3 points) Is linear regression a supervised learning method?
 - (a) True
 - (b) False
 - (c) It depends
 - (d) None of the above
2. (3 points) Which of the following methods do we use to find the best fit line for a dataset?
 - (a) Maximum likelihood estimation
 - (b) Least squares method
 - (c) Logarithm loss estimation
 - (d) None of the above
3. (3 points) Which of the following is **TRUE** about the residuals?
 - (a) smaller is better
 - (b) bigger is better
 - (c) It depends on the problem
 - (d) None of the above
4. Consider the `Automobile_data.csv` datafile. The Automobile dataset has a different characteristic of an auto such as body-style, wheel-base, engine-type, price, mileage, horsepower and many more. **In Python**, answer the following:
 - (a) (3 points) Using the pandas library, read the csv datafile and create a data-frame called `autos`
 - (b) (4 points) Create a scatter-plot between `horsepower` and `price`. Comment on the plot.
 - (c) (5 points) Build a linear model, in which `price` is the target variable and `horsepower` is the input variable. Interpret the slope of the line.