Assignment

Q.1

A random sample of 10 students produced the following data, where x is the midterm exam score out of 50, and y is the final exam score out of 100. Can you predict the final exam score of a random student if you know the midterm exam score?

MidtermExam = 40, 30, 33, 35, 44, 49, 23, 41, 42, 32
finalExam <- 95, 70, 80, 71, 74, 69, 55, 85, 94, 77

Estimate simple linear regression and predict the final exam score of a student who is having 48 in midterm exam.

Also plot linear regression. Add labels, title, plot shape, color and change plot size.

Q.2

A random sample of 10 employee considered, where x is the year of experience and y is the salary of employee. Can you predict the salary of the person if you know the year of experience?

Years_Exp = 1.1, 1.3, 1.5, 2.0, 2.2, 2.9, 3.0, 3.2, 3.2, 3.7
Salary = 39343.00, 46205.00, 37731.00, 43525.00,39891.00, 56642.00, 60150.00, 54445.00, 64445.00, 57189.00

Calculate simple linear regression and predict salary of two person who is having 3.5 year and 4.5 year of experience respectively.

Also plot linear regression. Add labels, title, plot shape, color and change plot size.

Q.3

Consider the available dataset: **mtcars**

Take hp (Gross horsepower) as a x value and Miles per gallon as y. Take first 10 records as sample from both fields. Predict value of mpg where hp is 94.

Also plot linear regression. Add labels, title, plot shape, color and change plot size.