**Homework**

**Simple Linear Regression**

**Answer 1**

(a) GPA in High School

(b) The target variable is continuous.

(c) The predictor of the target variable could be “attendance in the classroom”.

(d) Yes, a linear model is reasonable and the sign of the slope should be positive since it is directly proportional.

A white background with a black border

Description automatically generated with medium confidenceA screenshot of a computer

Description automatically generated **Answer 2A graph with a line and dots

Description automatically generated**

From the graph the predicted value at x=2.5 is 8.

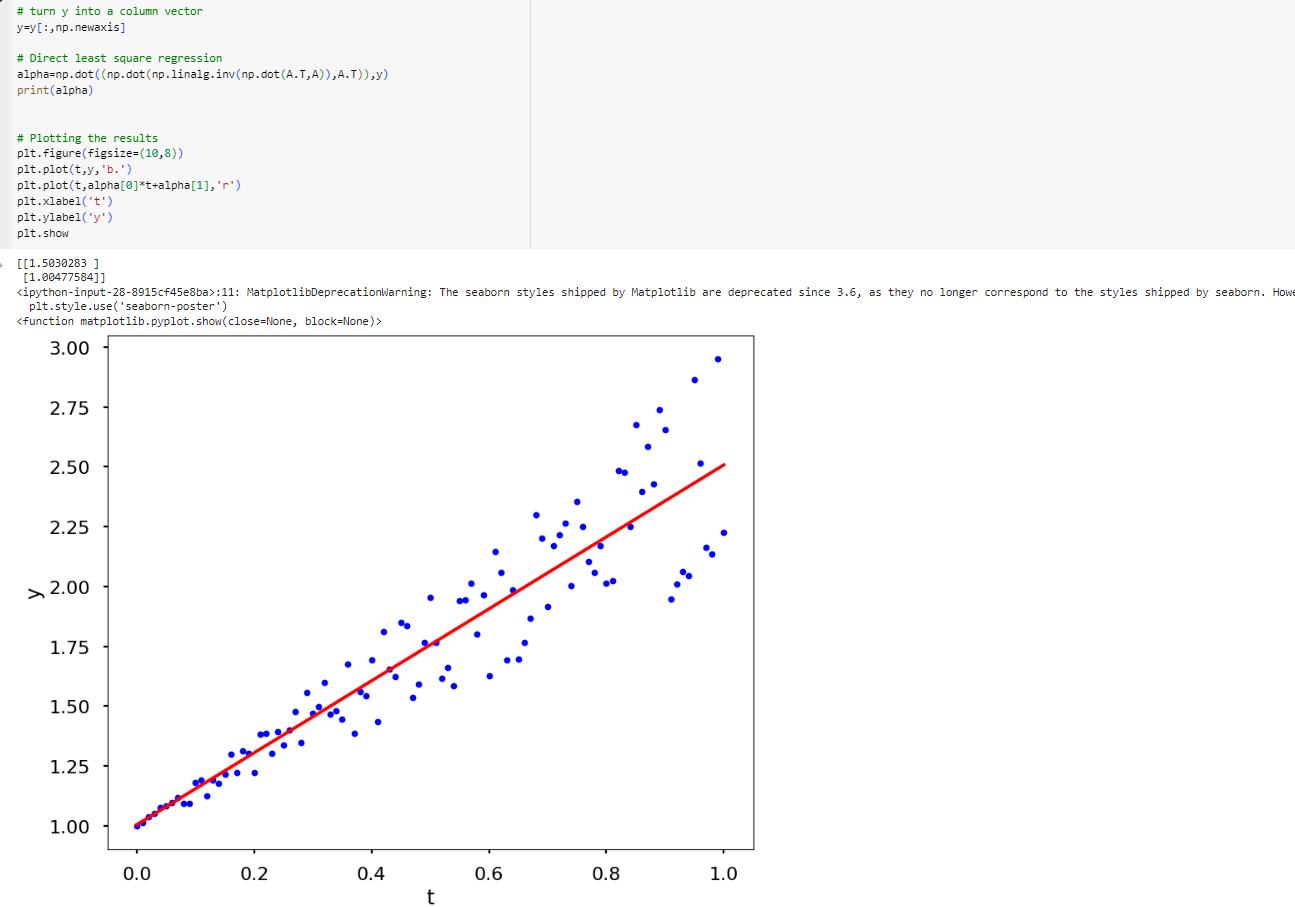
**Answer 3**

Linear Form : y= constant – gradient \* x

Using Least Square solutions :

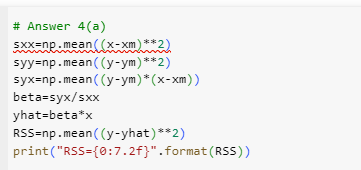
(c)





**Answer -4**

1. RSS (β) = where, n is the number of data points.



where

