Simple Linear Regression and Correlation Class|Group Project

PROVIDE A WRITTEN PAPER EXPLAINING THE PROJECT USING APA STYLE (double-spaced, Times New Roman, & 12-font).

Show Work

NAME Simone Bryant

NAME Mecca Austin

NAME Angela Lalwani

Some groups maybe given different data!

Given the sample of data from stocks (x) and (y) listed below.

X	-1	1	2	4	6	7	0.9476843
Y	-1	2	3	3	5	8	

a) Create a scatter plot from the data and explain the results.
What are the null and alternative hypotheses?

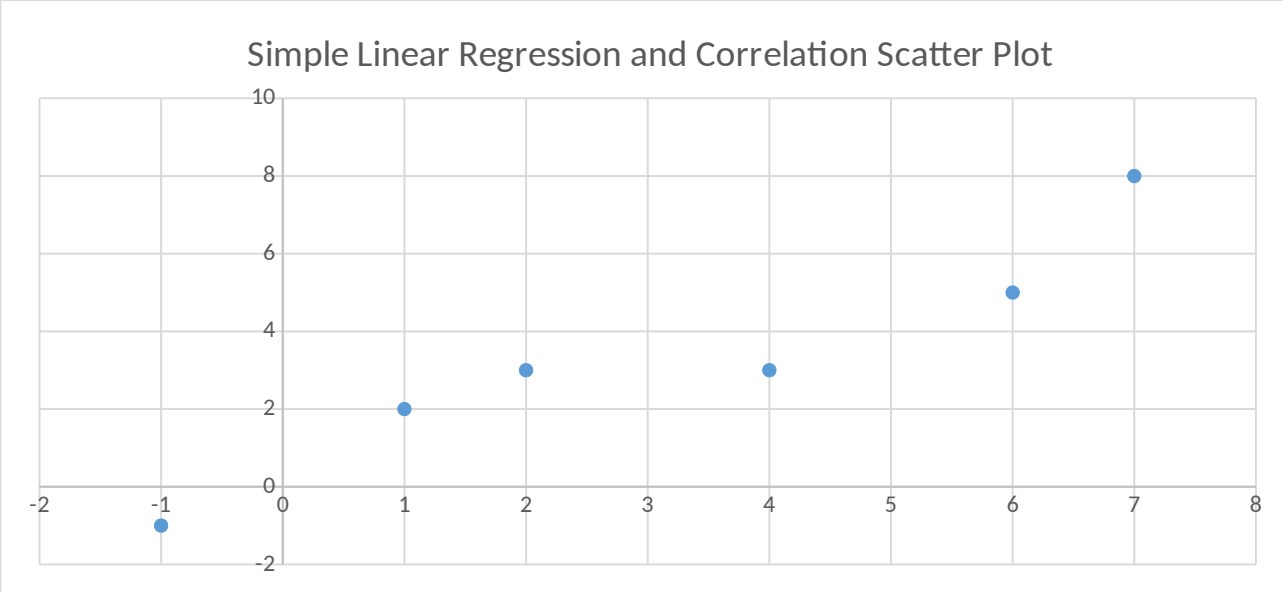
b) Determine the correlation coefficient.

c) Find the regression straight line y=ax+b

d) If the stock earn an x of 5, what is their predicted stock? Find y for x=5.

\

A) Scatter Plot, Explanation, Null Hypothesis & Alternative Hypothesis



As the x cordinates increase the y cordinates also increase therefore the linear correlation is positive.

Ho: p≤ 0

Ha: p>0

B) Correlation Coefficient

X	-1	1	2	4	6	7	r =
Y	-1	2	3	3	5	8	0.947684

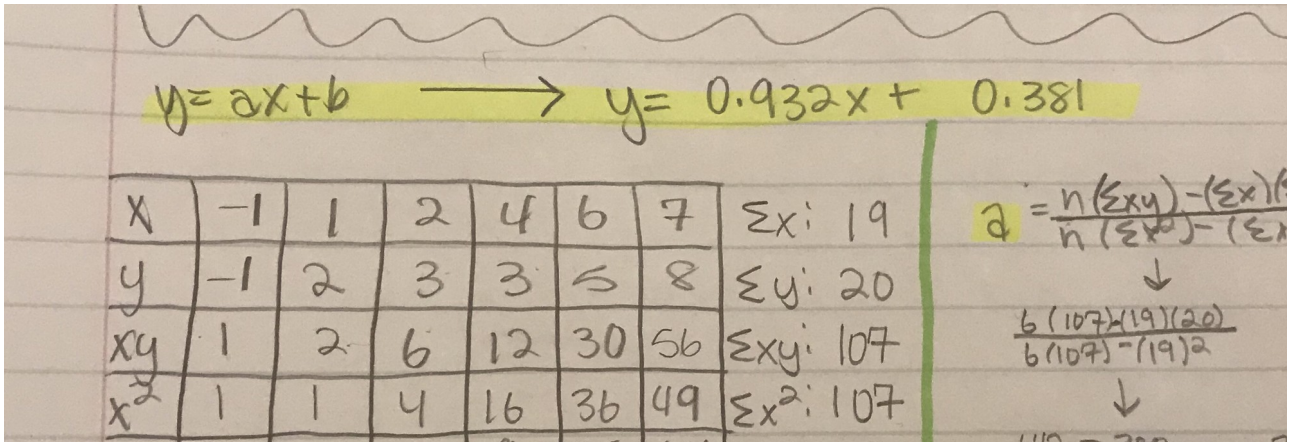
C)

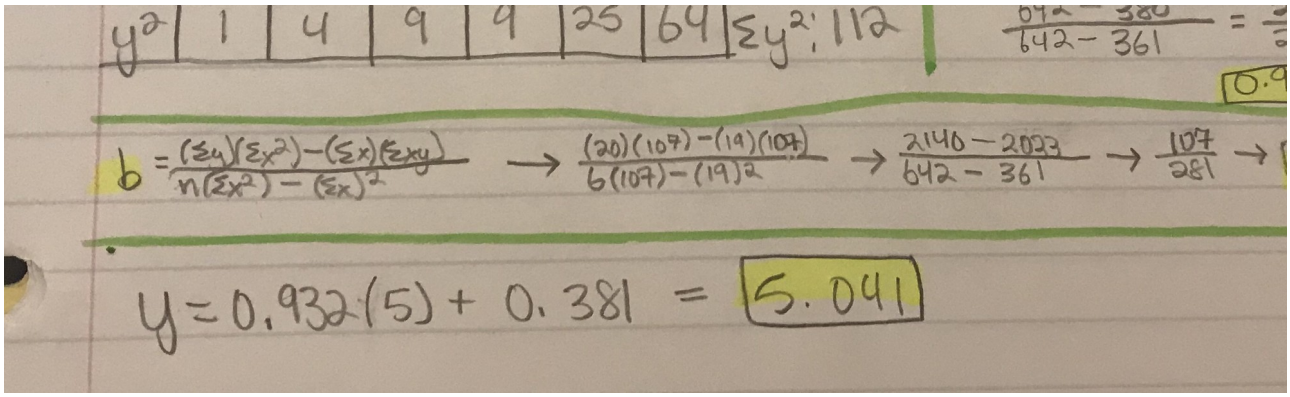
y=0.932x+0.381

D)

y= 5.041

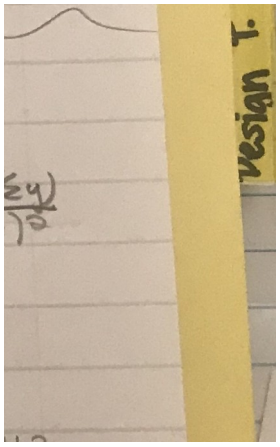
ALL WORK SHOWN BELOW

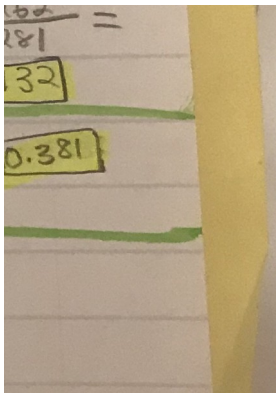



y^2 | 1 | 4 | 9 | 9 | 25 | 64 | Σy^2: 112
$\frac{642-380}{642-361}$ =
0.9
$b = \frac{(\Sigma y)(\Sigma x^2)-(\Sigma x)(\Sigma xy)}{n(\Sigma x^2)-(\Sigma x)^2} \rightarrow \frac{(20)(107)-(19)(107)}{6(107)-(19)2} \rightarrow \frac{2140-2027}{642-361} \rightarrow \frac{107}{281} \rightarrow$
$y = 0.932(5) + 0.381 = 5.041$

Classmates

1. Simone Bryant
2. Mecca Austin
3. Angela Lalwani




=
32
0.381