Here are the Midterm scores and Final scores of 12 STA201 students from Fall 2020.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Midterm Score** | 10 | 6 | 15 | 29 | 26 | 22 | 9 | 14 | 28 | 18 | 24 | 12 |
| **Final Score** | 42 | 38 | 33 | 47 | 45 | 40 | 39 | 29 | 42 | 27 | 32 | 22 |

a) Find the relationship between final score and midterm score using a scatter diagram and interpret.

b) Find correlation coefficient and comment. **(r)**

c) Fit a least square regression equation (line) of the final score on midterm score and comment. Y= alpha + beta X

d) What will be the final score when the midterm score is 16? Y= alpha + beta \* 16

e) Comment on the regression equation and explore how well it fits. R^2 =