

Exercise 40

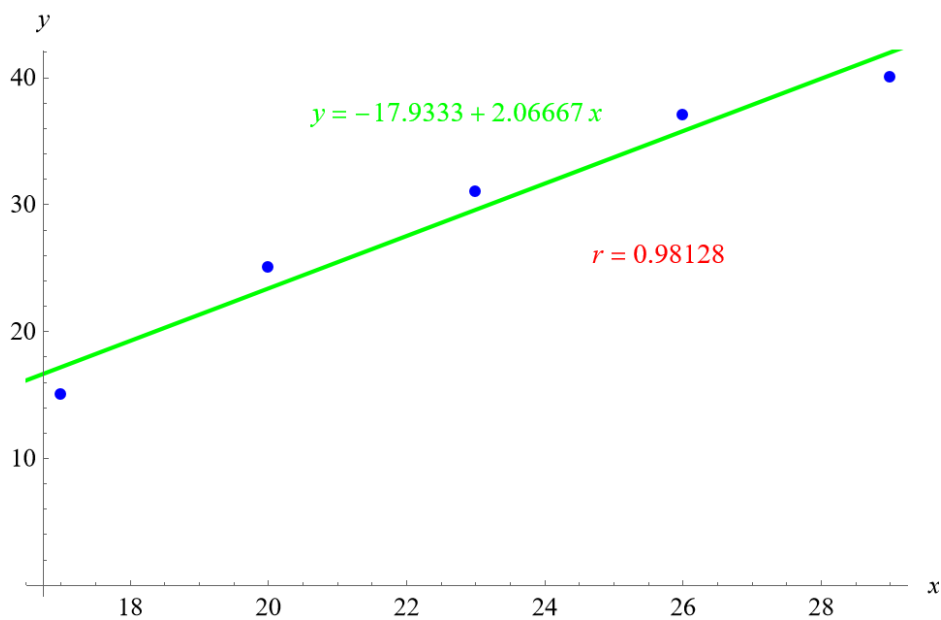
Based on the set of data given in Table 6, calculate the regression line using a calculator or other technology tool, and determine the correlation coefficient to three decimal places.

x	17	20	23	26	29
y	15	25	31	37	40

Table 6

Solution

Plot the following points: (17, 15), (20, 25), (23, 31), (26, 37), and (29, 40).



Mathematica's FindFit function gives

$$y = -487.834 + 0.247x$$

for the line of best fit. The Correlation function in Mathematica gives a correlation coefficient of

$$r = 0.981$$

to three decimal places.