

## Exercise 41

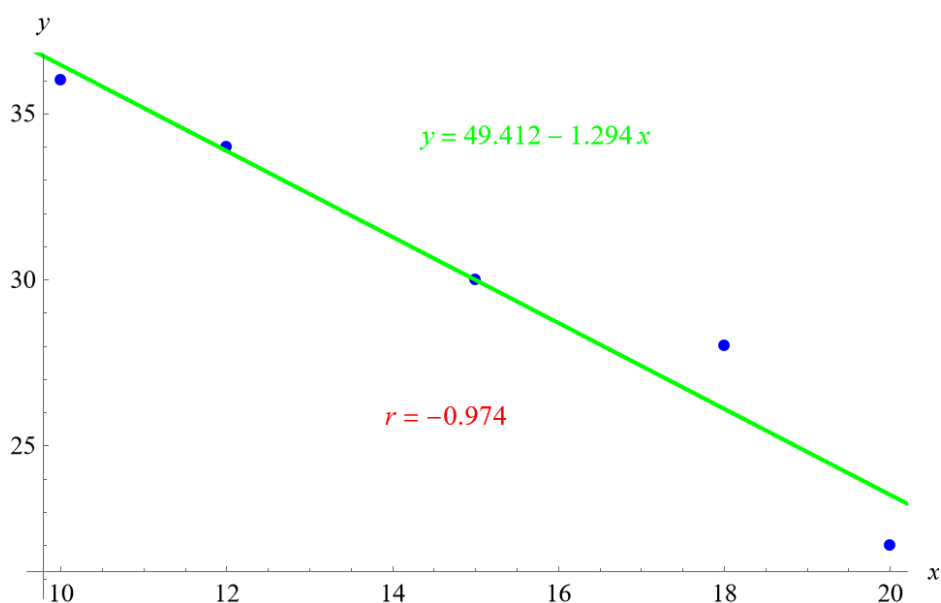
Based on the set of data given in Table 7, calculate the regression line using a calculator or other technology tool, and determine the correlation coefficient to three decimal places.

$x$	10	12	15	18	20
$y$	36	34	30	28	22

Table 7

### Solution

Plot the following points: (10, 36), (12, 34), (15, 30), (18, 28), and (20, 22).



Mathematica's FindFit function gives

$$y = 49.412 - 1.294x$$

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

$$r = -0.974$$

to three decimal places.