

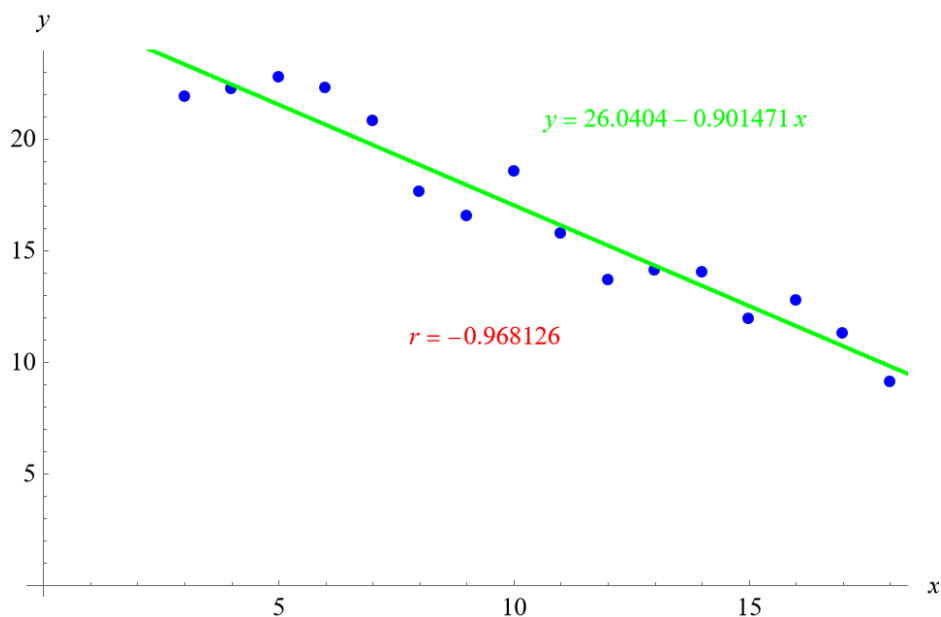
## Exercise 27

For the following exercises, use each set of data to calculate the regression line using a calculator or other technology tool, and determine the correlation coefficient to 3 decimal places of accuracy.

$x$	$y$	$x$	$y$
3	21.9	11	15.76
4	22.22	12	13.68
5	22.74	13	14.1
6	22.26	14	14.02
7	20.78	15	11.94
8	17.6	16	12.76
9	16.52	17	11.28
10	18.54	18	9.1

### Solution

Plot the following points on a graph: (3, 21.9), (4, 22.22), (5, 22.74), (6, 22.26), (7, 20.78), (8, 17.6), (9, 16.52), (10, 18.54), (11, 15.76), (12, 13.68), (13, 14.1), (14, 14.02), (15, 11.94), (16, 12.76), (17, 11.28), and (18, 9.1).



Mathematica's FindFit function gives

$$y = 26.0404 - 0.901471x,$$

and Mathematica's Correlation function gives  $r = -0.968126$ .