

Exercise 30

For the following exercises, use Table 4, which shows the percent of unemployed persons 25 years or older who are college graduates in a particular city, by year.

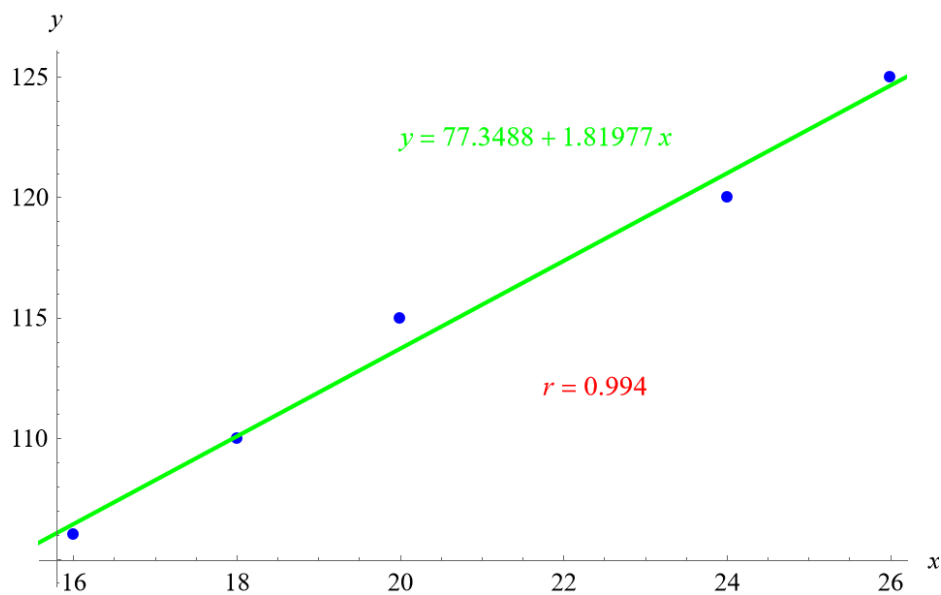
x	16	18	20	24	26
y	106	110	115	120	125

Table 5

Based on the set of data given in Table 5, calculate the regression line using a calculator or other technology tool, and determine the correlation coefficient. Round to three decimal places of accuracy.

Solution

Draw the following points on a graph: (16, 106), (18, 110), (20, 115), (24, 120), and (26, 125).



Mathematica's FindFit function gives

$$y = 77.349 + 1.820x$$

as the line that best fits the data. Mathematica's Correlation function gives

$$r = 0.994$$

as the correlation coefficient.