Exercise 7

A regression was run to determine whether there is a relationship between the diameter of a tree (x, in inches) and the tree's age (y, in years). The results of the regression are given below. Use this to predict the age of a tree with diameter 10 inches.

$$y = ax + b$$

$$a = 6.301$$

$$b = -1.044$$

$$r = -0.970$$

Solution

With the given numbers, the linear regression line is

$$y = 6.301x - 1.044.$$

According to this model, the age of a tree with diameter 10 inches is

$$y = 6.301(10) - 1.044 = 61.966$$

almost 62 years.