



The regression equation of best fit is

$$y = 117.2626866x + 9326.137313.$$

The number $r = .9691320811$ is called the correlation coefficient. This is a number between -1 and 1 that measures the degree to which two variables are linearly related.

$r > 0$ when the regression equation has a positive slope and $r < 0$ when the regression equation has a negative slope.

If $r = \pm 1$, the points lie on a line. The more closely the variables are related, the closer r is to ± 1 . $r = 0$ means the variables are not linearly related.

The number $r^2 = .9392169905$ is the coefficient of determination. The closer this is to 1 , the better the line models the data.

To graph the regression equation, follow steps 1–6 in the Technology Tip on page 35 or just hit **GRAPH**. We get the following graph:

