The regression parameters or coefficients b_o and b_1 are unknown but you can estimate them using the *method of least squares*. In this method, you obtain the regression line that best fits the data. With the aid of calculus, you do this by obtaining and minimizing the sum of the squared deviations between the actual Y_i and its expected value, given by

$$\sum_{i=1}^{n} \varepsilon_i^2 = \sum_{i=1}^{n} (Y_i - \beta_o - \beta_1 X_i)^2 .$$

Thus, the best fit or regression line is expressed as

$$\hat{y} = b_o + b_1 x.$$

$\hat{y}$ ████████████████████

$\hat{y}$ ███████████████████████