Eq^n —— (2)

$$-2 \sum_{i=1}^{n} (y_i - \hat{\beta}_0 - \hat{\beta}_1 x_i) x_i = 0$$

$$\sum_{i=1}^{n} (y_i - \hat{\beta}_0 - \hat{\beta}_1 x_i) x_i = 0$$

$$\sum_{i=1}^{n} x_i y_i - \hat{\beta}_0 \sum_{i=1}^{n} x_i - \hat{\beta}_1 \sum_{i=1}^{n} x_i^2 = 0$$

$$\sum_{i=1}^{n} \left(x_i y_i - (\bar{y} - \hat{\beta}_1 \bar{x}) x_i - \hat{\beta}_1 x_i^2 \right) = 0$$

$$\sum_{i=1}^{n} \left(x_i y_i - \bar{y} x_i + \hat{\beta}_1 \bar{x} x_i - \hat{\beta}_1 x_i^2 \right) = 0$$