

On the TI-30X calculator

to find the standard deviation:

Hit 2nd , then Data, scroll to the right until CLRDATA is highlighted, hit enter

Hit 2nd , then Data, highlight 1-VAR, hit enter

Hit Data, then enter in your first observation after X1 =

Hit the down arrow twice, then enter in your second observation after X2 =

After typing in your last observation hit the Statvar key

Scroll to the right until Sx is highlighted, this is the standard deviation

To calculate the standard deviation by hand use:

$$s = \sqrt{\frac{\sum (x_i - \bar{x})^2}{n - 1}}$$

to find the slope and intercept, a and b, and the correlation coefficient, r

Hit 2nd , then Data, scroll to the right until CLRDATA is highlighted, hit enter

Hit 2nd , then Data, highlight 2-VAR, hit enter

Hit Data, type in your first X observation, hit the down arrow once

Type in your first Y observation, hit the down arrow once

Continue entering in your data

After typing in your last observation, hit Statvar

Keep scrolling to the right and you will find a, b, and r

To find a, b, and r by hand, you can use:

$$a = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sum (x_i - \bar{x})^2} \quad b = \bar{y} - a\bar{x}$$

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2} \sqrt{\sum (y_i - \bar{y})^2}}$$

To find R^2 , the coefficient of determination, just take r and square it