Linear Regression Analysis

Fitting a Regression Line to a Data Set

1. Create a list of ***x*** values as L_1 and the corresponding ***y*** values as L_2.

2. Enter window settings that will encompass the data and the anticipated projected values.

3. Set the parameters for Plot1:
   2nd Y=
   1… Plot1 On [Turn Plot1 **Off** for other than LinReg operations]
   Plot1
   Type (scatter)
   Mark □
   ENTER

4. GRAPH to plot the data points.

5. Fit the regression line to the data:
   2nd 0 DiagnosticOn (required to display **r** value; do this only once)
   STAT ▸ CALC 4:LinReg (ax+b)
   LinReg (ax+b) 2nd 1 , 2nd 2 , VARS ▸ Y-VARS ENTER ENTER
   LinReg (ax+b) L_1, L_2, Y_1
   ENTER

   LinReg
   y = ax+b
   a = 123.4567… a is the slope of the regression line
   b = 1.2468…. b is the y-intercept (value at x = 0)
   r^2 = .9999….
   r = .9999…. r is the measure of fit (as a percentage)

6. 2nd TRACE 1:Value ENTER

7. X= ___ Enter a value to get projection.