

SREGR

SIMPLE LINEAR REGRESSION WORKSHEET

Regression Line is $Y =$

Correlation Coefficient (r) is

r-squared is

Significance Test of Regression:

(Testing the hypothesis that the slope is zero.)

Student's t-statistic

Number of Degrees of Freedom

Intermediate Results Area

Number of Observations

Mean Value of X

Mean Value of Y

Mean Value of $(X*Y)$

Corrected Sum of Squares of X

Corrected Sum of Squares of Y

Corrected Sum of Cross-Products $(X*Y)$

Variance of X

Variance of Y

Unexplained Variance of Y, Given X

Standard Deviation of Y, Given X

Standard Deviation of Slope (b)

DATA INPUT AREA

Enter Pairs of Values Below

Observation

Number

Y-Value

=====
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=====

=====
#DIV/0! + X * #DIV/0!

#DIV/0!
#DIV/0!

#NAME?
0

0

#DIV/0!
#DIV/0!
#NAME?

#DIV/0!
#DIV/0!
#NAME?

#NAME?
#NAME?
#DIV/0!
#DIV/0!

#NAME?

X-Value Y-Estimate Y*X
#NAME? #NAME?

\0: \B:
/dfobsnos~1~~~
/ruinputarea~/wgpe
{home}/xmmenu~

MENU:
Input
Input Data
/xminptmenu~

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BLANK:
No
Leave Data Intact. Return to Menu.
/xmmenu~

INPTMENU:
XYPairs
Enter Data in X-Y Pairs (X First)
/ruinstr~/cinputinstr2~instr~/ruinstr~
{goto}temp~@count(b46.b47)~
{home}{pgdn}{pgdn}{goto}input~
/xitemp=2~{end}{down}
/xitemp>0~{down}
{right}
{?}{left}{?}{right}{down}/xgf28~

CALC:
/xi@count(b46.b48)<3~/xlInsufficient Data entered.~temp~/xmmenu~
/wgpd/recalcarea~
{home}{pgdn}{pgdn}{goto}input~/rncyinput~{bs}.{end}{down}~
{right}/rncxinput~{bs}.{left}{end}{down}{right}~/rncxvalues~{bs}.{end}{down}~
{right}/rncyest~{bs}.{left}{end}{down}{right}~
/wgpd/c~.yest~
{right}/rncxy~{bs}.{left}{left}{left}{end}{down}{right}{right}{right}~
/c~.xy~
{home}{pgdn}{goto}n~@count(yinput)~
{down}{down}@avg(xinput)~
{down}@avg(yinput)~
{down}@avg(xy)~
{down}{down}+n*@var(xinput)~
{down}+n*@var(yinput)~
{down}@sum(xy)~
/wgpe{home}{calc}
/xmmenu~

RESULTS:

Final

View Regression Equation and Final Statistics.

{goto}a1~

/xmresults~

UPDOWN:

Down

Go Down to Next Page.

{pgdn}/xmupdown~

GRAPHMENU:

Rawdata

Plot Raw Data and Regression Line.

/gtxxxvalues~ayest~byinput~rcdefq

ola{esc}Regression Line~lb{esc}Raw Data~

falbsq

ts{esc}Raw Data & Regression Line~

qv{esc}{esc}

/xmgraphmenu~

GRAPHOPT:

Color

Show Graphs in Color.

/gocqq

/xmgraphopt~

\P:

/recopyright_p1~

/xmprint~

PALIGN:

/xlAlign Paper then Press ENTER~temp~

/xr

PRINT:

Results

Print Regression Equation, Final Statistics, and Intermediate Results.

/xcpalign~

/ppra1.e40~cbagpq

/xmprint~

NUMBERCONF:

No

Do not erase and resize input area. Return to input menu.

/xminptmenu~

DEFOBSNOS:

/reobsnos~/ctemp~f111~
{goto}f111~{edit}{home}a~
/rncobsnos~a46.
a245
~/dfobsnos~1~~~/xr

TEMP:

```
{esc}{esc}{esc}{esc}{esc}
{esc}{esc}{esc}{esc}{esc}
{home}/ruinputarea~/xmmenu~
```

Blank
Clear Input Fields
/xmblank~

Calc
Calculate Results
/xgcalc~

Yes
Erase All X-Y Data Values.
/reinputarea~
/xmmenu~

YXPairs
Enter Data in Y-X Pairs (Y First)
/ruinstr~/cinputinstr2~instr~/ruinstr~
{goto}temp~@count(b46.b47)~
{home}{pgdn}{pgdn}{goto}input~
/xitemp=2~{end}{down}
/xitemp>0~{down}
{?}{right}{?}{left}{down}
/xgg27~

Est-X
Enter X-Values For Which Y Estimates Are Required
/ruinstr~/cinputinstr2~instr~/ruinstr~
{goto}temp~@count(b46.b47)~
{home}{pgdn}{pgdn}{goto}input~
/xitemp=2~{end}{down}
/xitemp>0~{down}
{right}
{?}{down}/xgh28~

Sheet1

Intermed

View Intermediate Results.

{goto}a21~

/xmresults~

Rawdata

View Raw Data and Y Estimates.

{goto}a41~{goto}a46~/wth

/xmupdown~

Up

Go Up to Previous Page.

{pgup}/xmupdown~

Quit

Return to Results Menu.

/wtc/xmresults~

Options

Set Graph Options.

/xmgraphopt~

/xmgraphmenu~

View

Re-display the Latest Graph.

/gvq

/xmgraphmenu~

B&W

Show Graphs in Monochrome.

/gobqq

/xmgraphopt~

Quit

Return to Graph Menu.

/xmgraphmenu~

Data

Print Raw Data and Y Estimates.

/xcpalign~

{goto}a46~

/ppr{bs}~{right}{right}{right}{right}{end}{down}~

cbobra41.e45~qagpq

/xmprint~

Quit

Return to Main Menu.

/ccopyright~copyright_p1~/rucopyright_p1~

{home}/xmmenu~

Yes

Erase and resize input area, then return to input menu.

/xgnumber~

DEFINPUTAREA:
/reinputarea~/rpinputarea~/ctemp~h111~
{goto}h111~{edit}{home}c~
/rncinputarea~b46.
d245
~/ruinputarea~/xr

Results

Show Results

/xmresults~

Range

Use Standard 'Range Input' Facility.

/ruinstr~/cinputinstr~instr~/ruinstr~

/riinputarea~

/xminptmenu~

Quit
Return to Main Menu.
{home}/xmmenu~

Quit
Return to Main Menu.
{home}/xmmenu~

NUMBER:
/wgpd
/xnEnter Max. Number of Observations ~temp~
{goto}temp~{edit}{home}45+@max(20,@min(2000,@int({end})))}{calc}~

/xcdefobsnos~
/xcdefinputarea~
/xcdefcalcareas~
{home}/wgpe
/xminptmenu~

Graph
Show Graphs
/xi@count(e46.e48)<3~//{esc}/xlInsufficient Data to Plot.~temp~/xmmenu~
/XGgraph~

AGEN:
No
Return to Main Menu in This Worksheet.
/xmmenu~

Number
Set Maximum Number of Observations (erases input area).
/xmnumberconf~

INPUTINSTR:
Enter Y-Values in Column B.
Enter X-Values in Column C.

DEFCALCAREA:
/recalcarea~/ctemp~j111~
{goto}j111~{edit}{home}e~
/rnccalcarea~d47.
p245
~/xr

Sheet1

\\:
{esc}{esc}{esc}{esc}{esc}
{esc}{esc}{esc}{esc}{esc}
{home}/ruinputarea~/xminptmenu~

Print
Print Results
/xg\P~

Agenda
Return to Worksheet Selection Agenda
/xmagen~

Quit
Exit to 1-2-3
/xq

Yes
Exit to Worksheet Selection Agenda.
/fragenda~

Quit
Return to Main Menu
/xmmenu~

INPUTINSTR2:
Press Ctrl-Break to Stop.
Then Press Alt-M to Get Menu.

GRAPH:

```
{goto}setskip~{down}  
@MAX(1,@INT(@COUNT(xvalues)/5))  
{calc}~{edit}{home}'~  
/XCsetskip~  
{home}/XMgraphmenu~
```

SETSKIP:

```
/GOSS  
1  
~QQ/XR
```