Subject: Re: REGRESS Question
Posted by Chris Lee on Wed, 22 Oct 2003 10:44:50 GMT
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In article <932b9720.0310210627.f93c6f2@posting.google.com>, "Kevin M. Lausten" <kevinlausten@hotmail.com> wrote:

> I am having difficulty working with the REGRESS function. I continually
> get values <1 for my slope when doing a regression between two vectors.
> When I do a regression mapping y to x (slope = regress(x, y, const =
> const)) and when I do a regression mapping x to y (slope = regress(y, x,
> const = const) I get a slope<1 for both calculations. Shouldn't the
> y=mx+b of these two regressions be inverses of each other (leading to
> one slope>1, and one<1?) Maybe I am misunderstanding regressions?
> Thanks,
> kevin

Hi,

If you try the regression with the simplest possible straight line

y = mx +c

where m=1 and c=0 , so

y=x

if you regress with y=f(x), you get a value of 1 (and a constant of 0)
if you regress with x=f(y), you get a value of 1, again.

if the gradient is negative for y=f(x), it has to be negative for x=f(y).
The two equations you are assuming in the regressions are

y= mx + c OR x = (y-c)/m = ny + d

n=1/m, so sign is preserved. (and d=-c/m = -cn)

HTH

Chris.