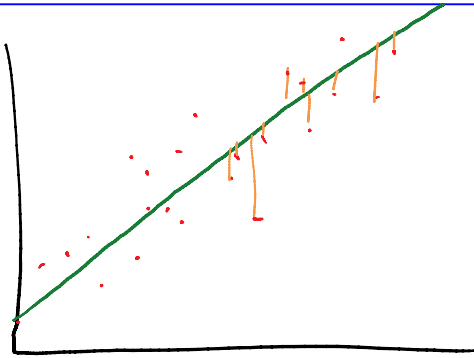# Fits to a line

Find data .itx in d2l under Content -> In-class data
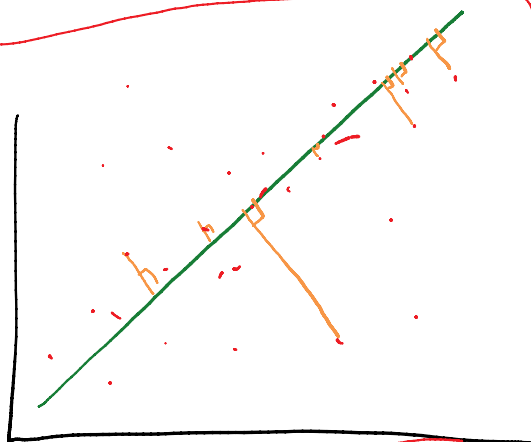
Or not...

Normal fit
minimizes $(1)^2$ $\Rightarrow$ $\sum (1)^2 = \chi^2$
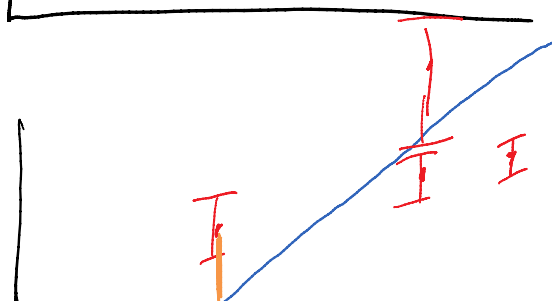
assumes
- no uncert. in x values
- unc. in y values "same" $\Rightarrow$ same σ

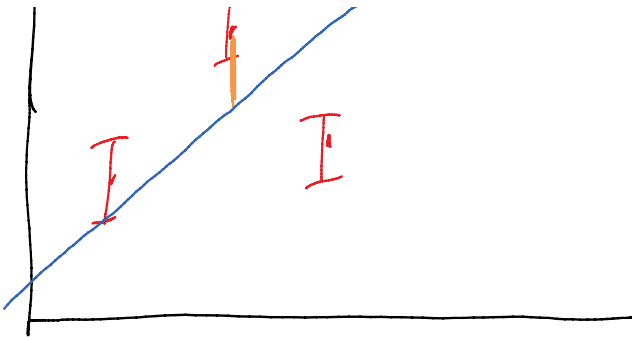minimize $(\lambda)^2$

orthogonal distance regression (ODR)

weighted fit
$\Rightarrow$ distance $\left(\dfrac{l_i}{\sigma_i}\right)^2$

Sometimes wts defined

as $\frac{1}{\sigma}$, 1, σ

In Igor:

Curve Fit

by default writes to fit_____ name of y wave

→ overwrites that wave each time you run curve

exam scores: exam 1 - score
                exam 2 - score
                exam 3 - score

objects have names

"exam" + _____ + "_score"

str2num(idex)

name

wave $ _____
         string

↑ converts a string to an object name

access a wave that exists

wave internalName = $ "exam" + num2str(idex) + "_slope"

make /O/N= 2 $"exam" + num2str(idex)+ "_avg" /wave = internal Nm

wave internal name = $...