

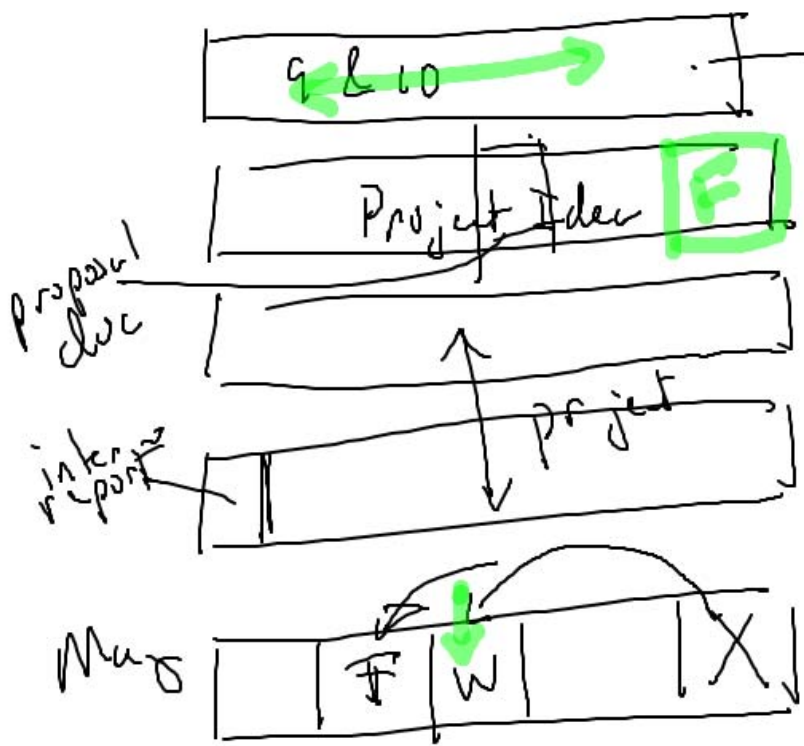
EM&CP Blk Friday, April 1, 2022

$$\frac{\rho}{\rho_0}$$

$$\frac{\text{kg}}{\text{m}^3}$$

$$\frac{\text{lb}_m}{\text{ft}^3}$$

Next week: Another PA + finish ddl 9 & (10)



requirement for project

* something new to you

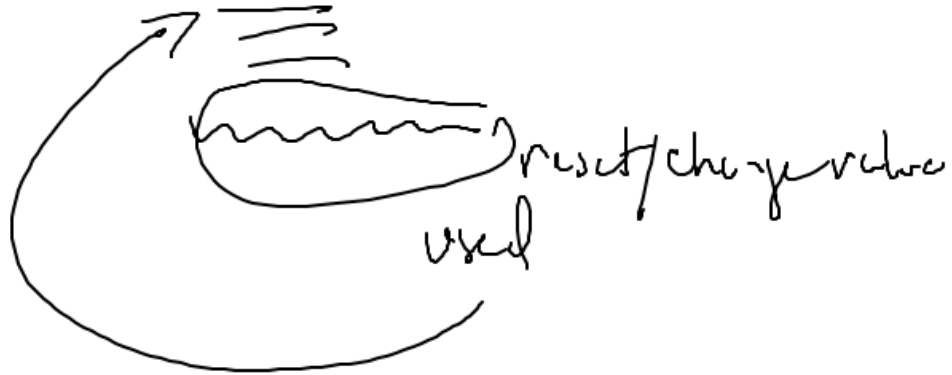
(creat) * must have at least 2 non-trivial original classes (you write)

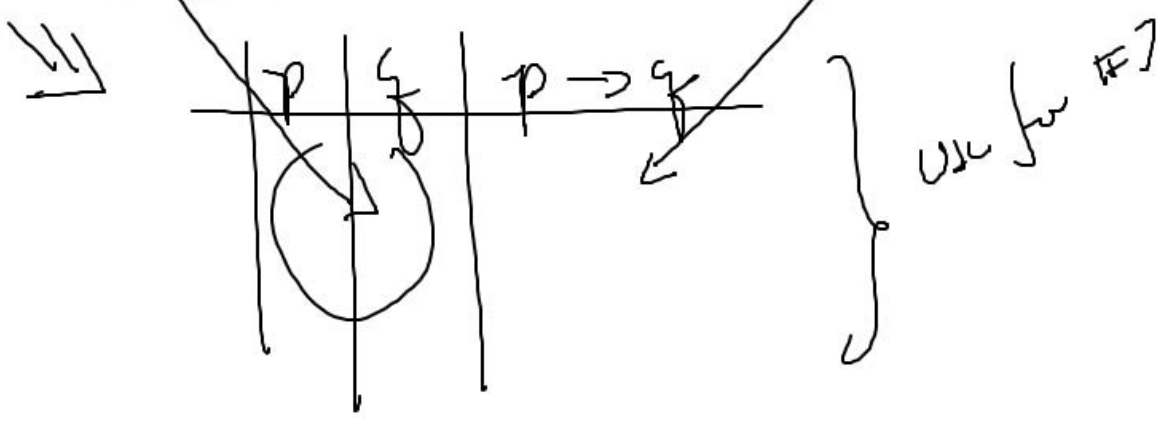
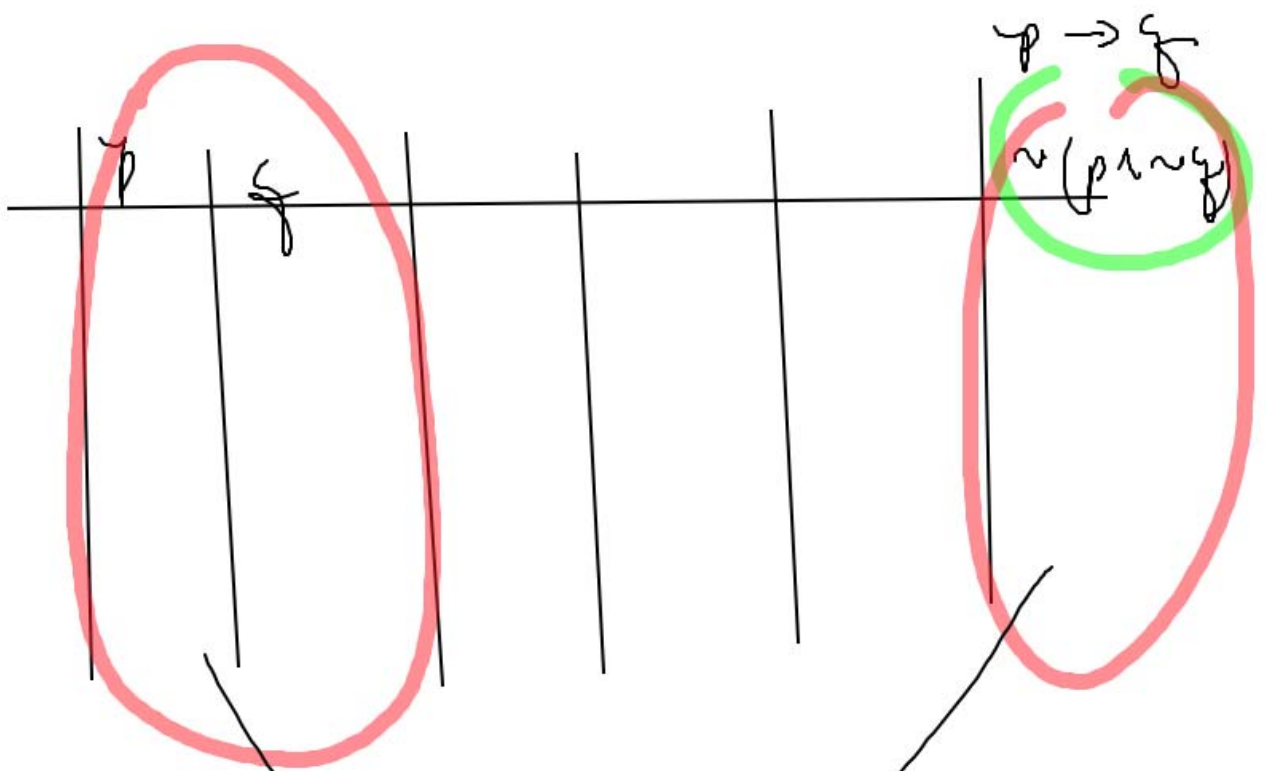
pg 279

(#3) (discussion)

(prime)

while so condition is true





PA #9 Walk Thru

a function

if a number is prime

(#1)

— pg 280, #6

(most also work #5 on pg 280)

wrapper for a lot of numbers

all shell

defensive programming

functions

input: n — validate input

output: all prime numbers less than or equal to n

while loop(s)

you decide
output display

#2

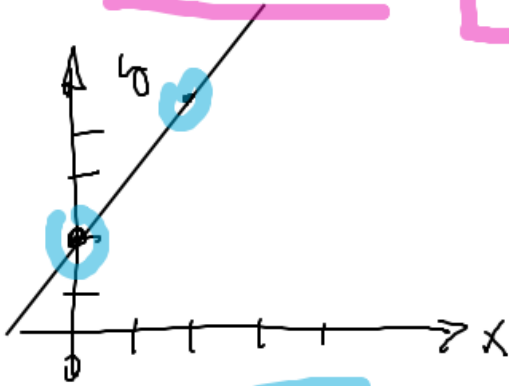
Criteria for "best fit"

pg 291, #13

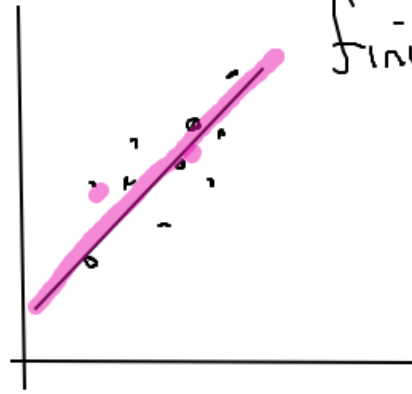
finding a line

least squares

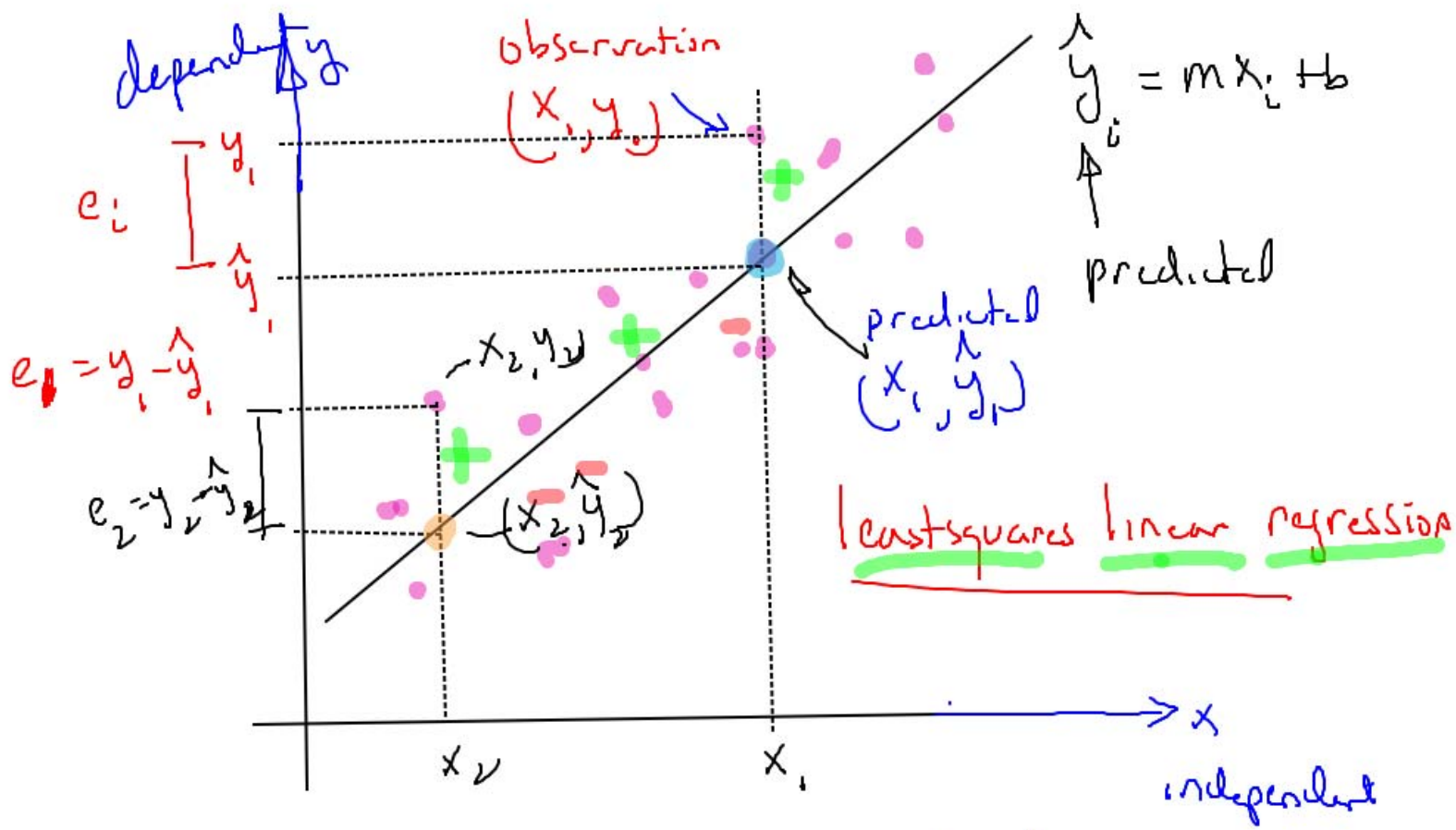
linear regression



$$y = 2x + 2$$



find best fit equation "to the data"

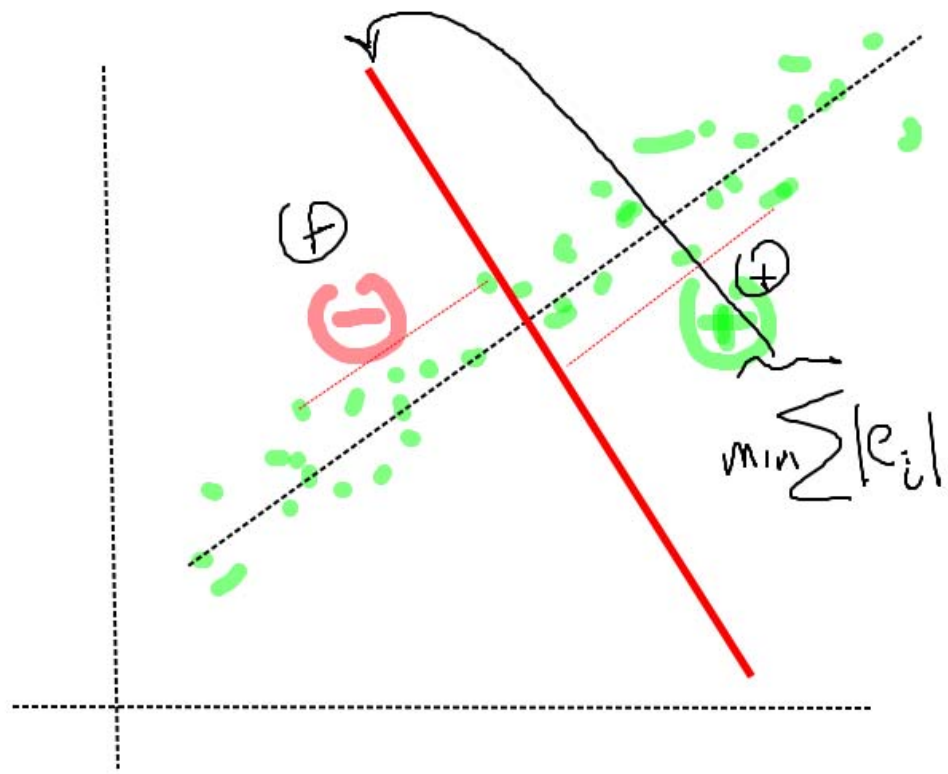


Criteria for "best fit":

use x value to predict y

tells one how to find m & b

$$\min \sum_{i=1}^n e_i^2 = \min \sum_{i=1}^n (y_i - \hat{y}_i)^2$$



equations for a line

find: slope & y-intercept

$$y = mx + b \quad \text{slope - intercept form}$$

$$(y_1 - y_2) = m(x_1 - x_2) \quad \text{point - slope form}$$

$$Ax + By + C = 0 \quad \text{general form}$$