

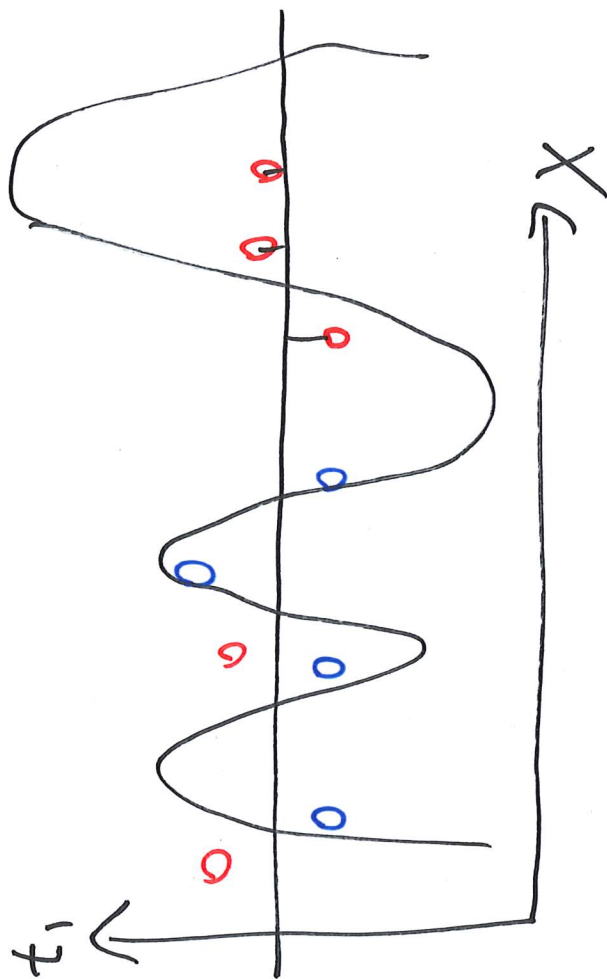
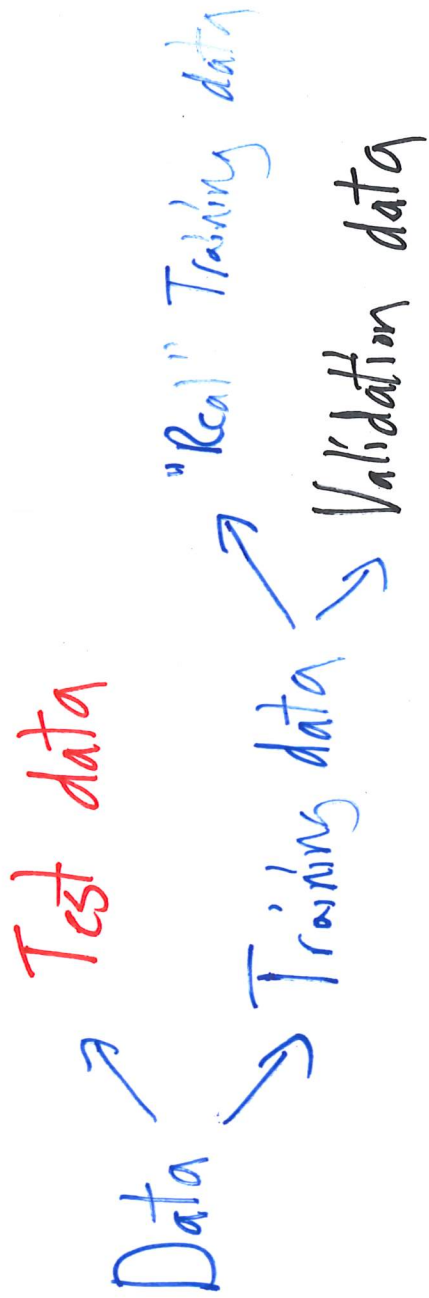
$$y_1(x) = w_{0,1} + w_{1,1}x + w_{2,1}x^2$$

$$y_2(x) = w_{0,2} + w_{1,2}x + w_{2,2}x^2$$

⋮

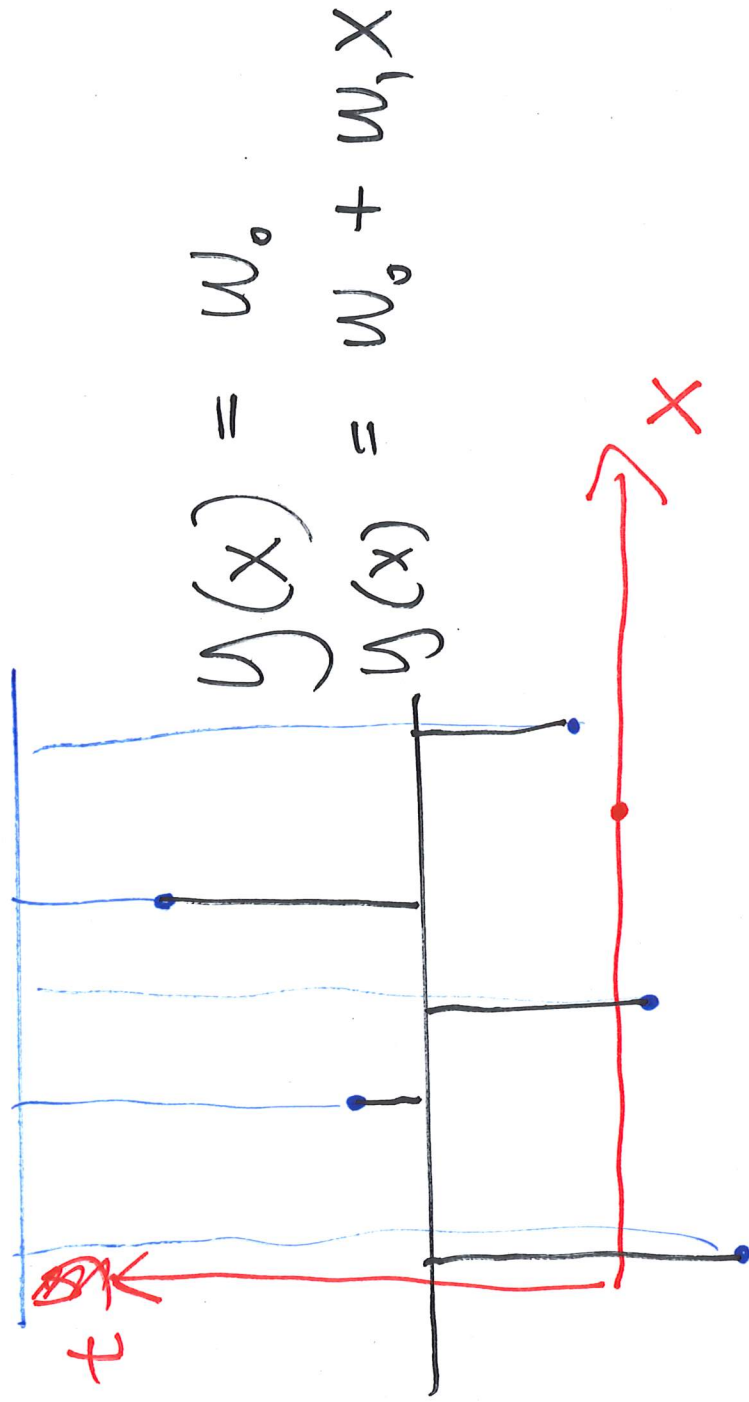
$$\bar{y}(x) = \frac{1}{4} (y_1(x) + y_2(x) + y_3(x) + y_4(x))$$

X F
"w equal weights" + "study of each" = [w]



X # spam emails company sends

$y(x) = \Delta$ stock price 2 months later if company sends X emails



X

pixels (1, 2)

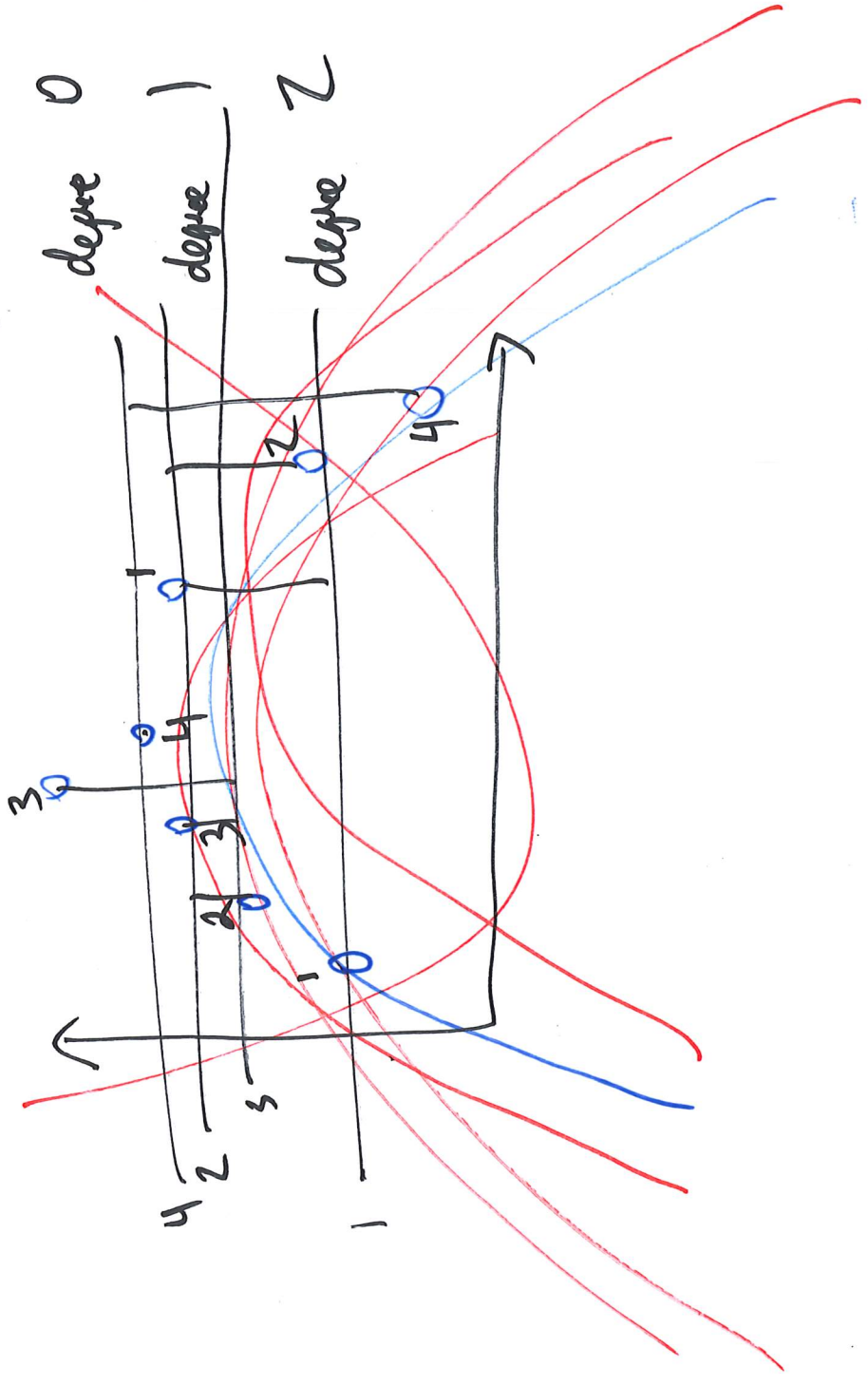


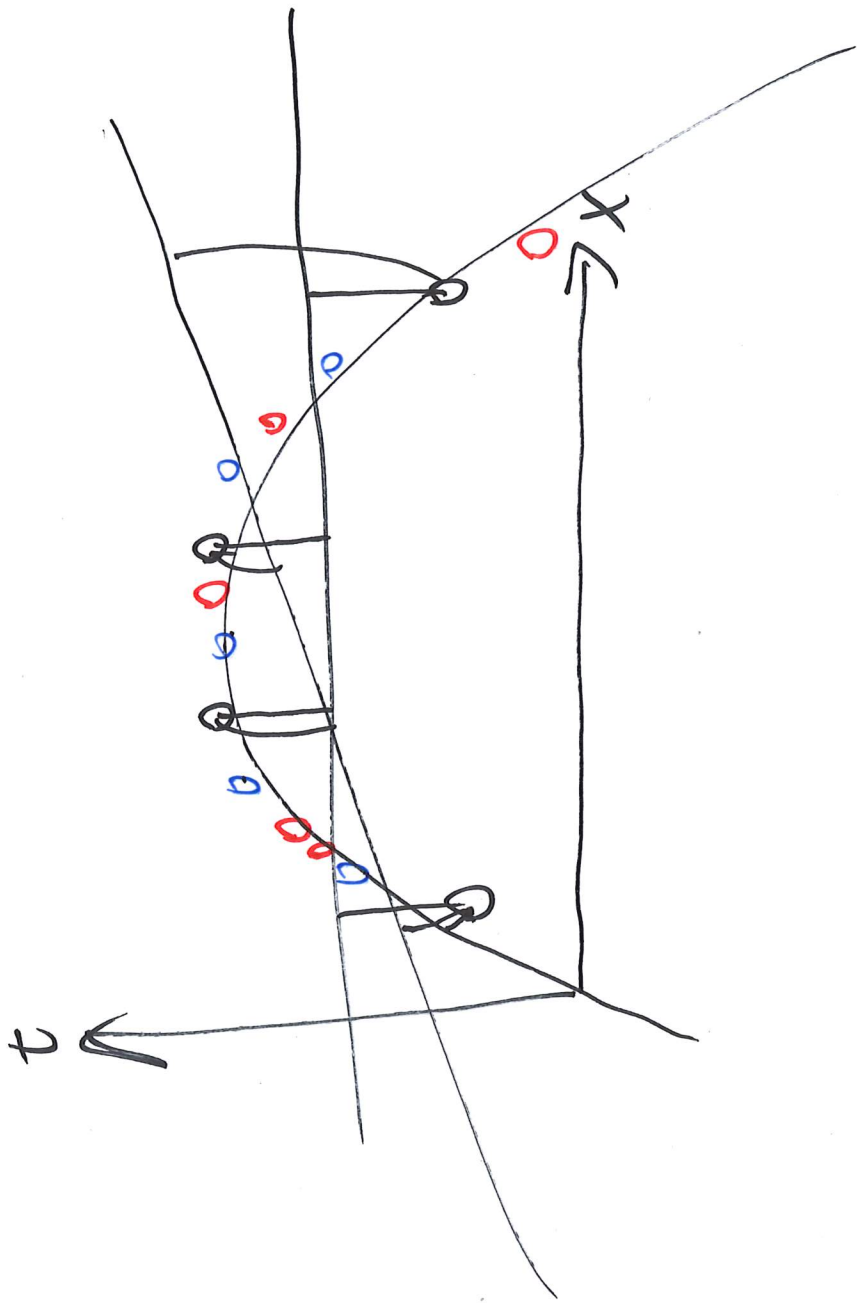
if pixels (16, 23) > 0.3 && pixels (31, 18) < 0.65
return "6"

y([3]) = (0.2, -68, 506, ...)
= (0, 0, 1, 0, ..., 0)

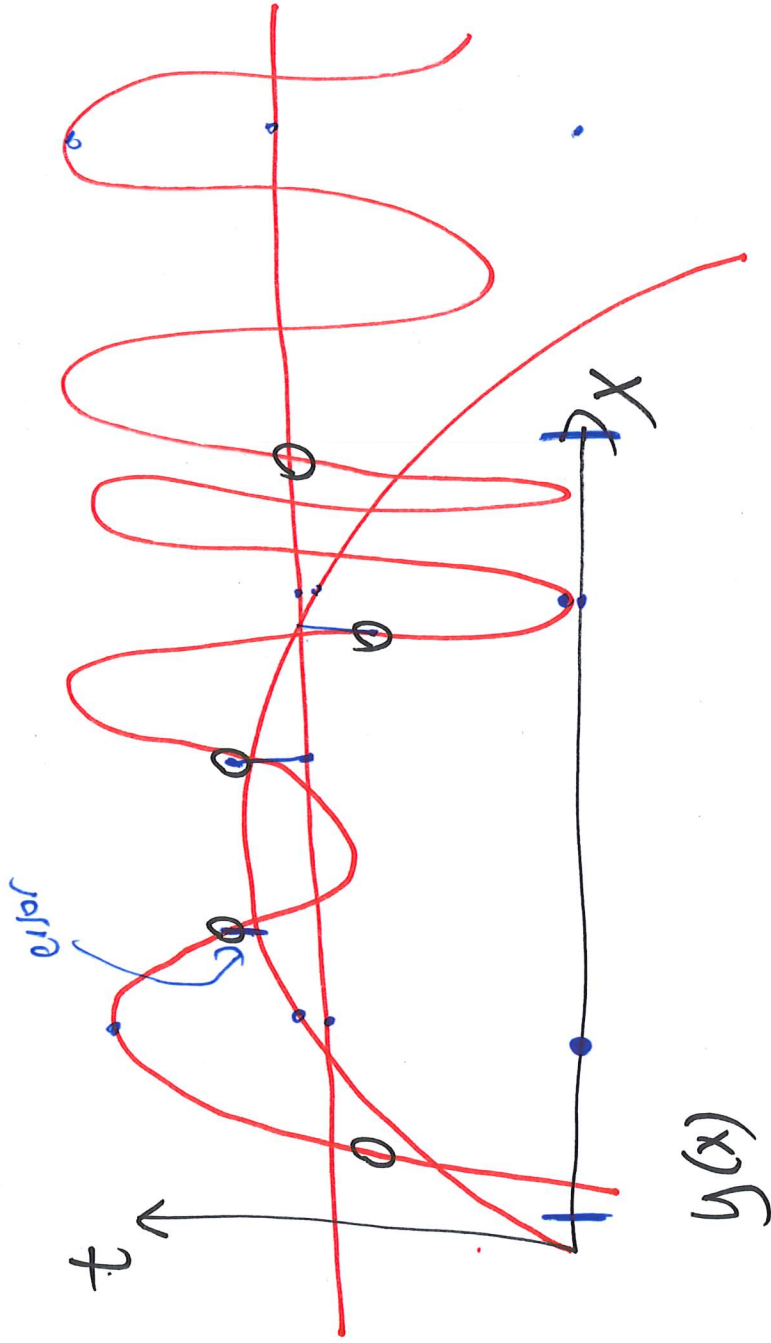
F_1 F_2 F_3 F_4

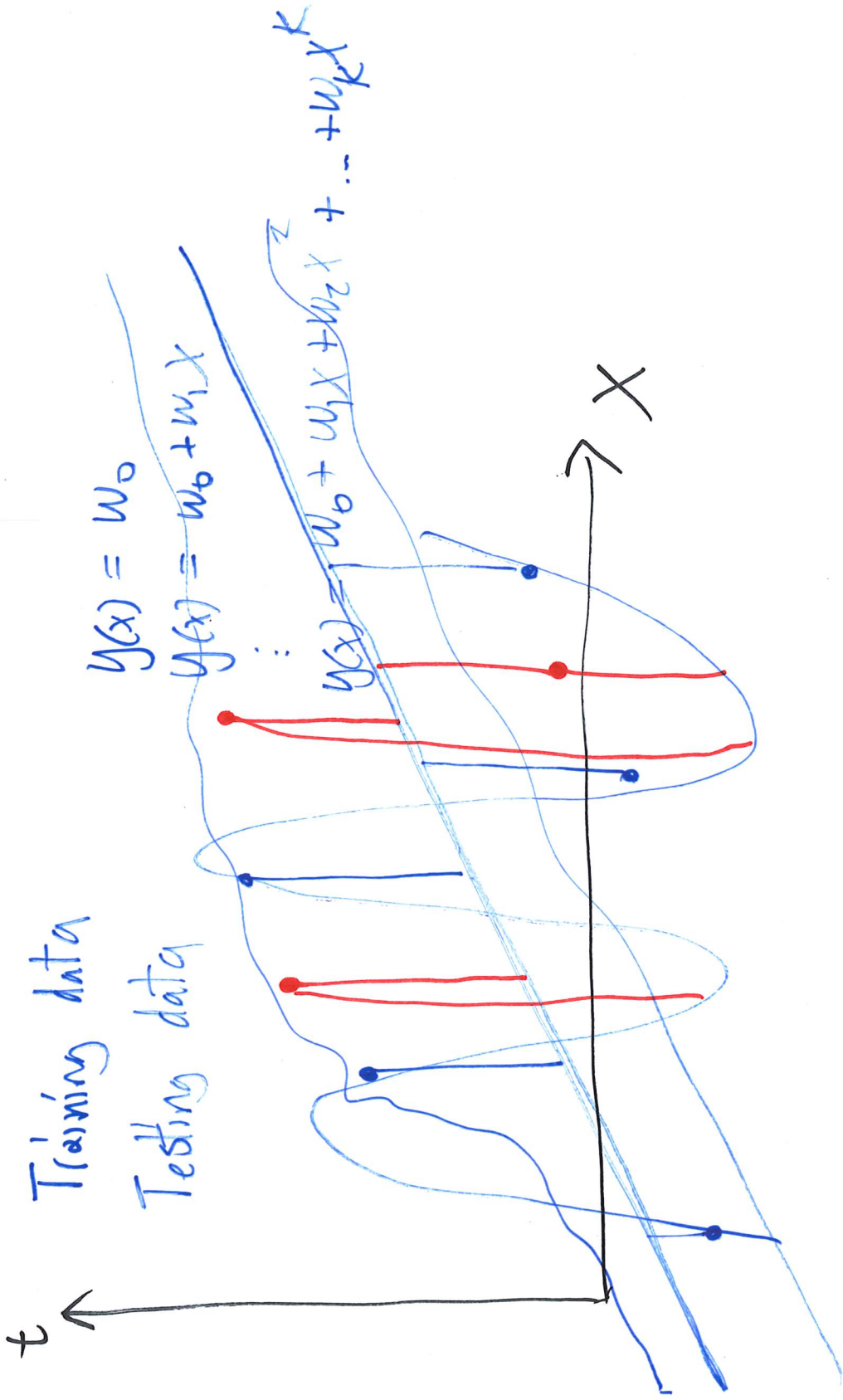
Should I use

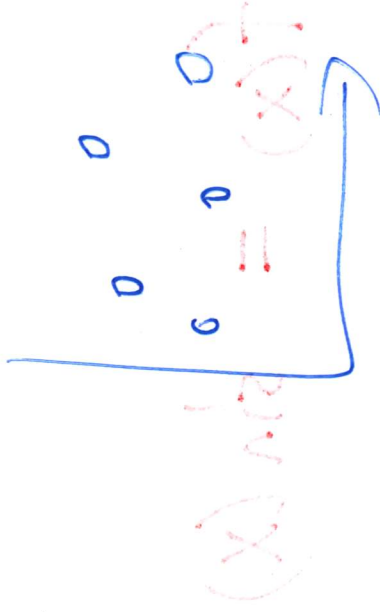




$(x_1, t_1), (x_2, t_2), \dots, (x_N, t_N)$







$E(w)$ = be close to the blue points

+ (don't use large coefficients)

$$= \sum_{n=1}^N \{ t_n - y(x_n; w) \}^2$$
~~$$+ (|w_0|^2 + w_1^2 + w_2^2 + \dots + w_D^2)$$~~