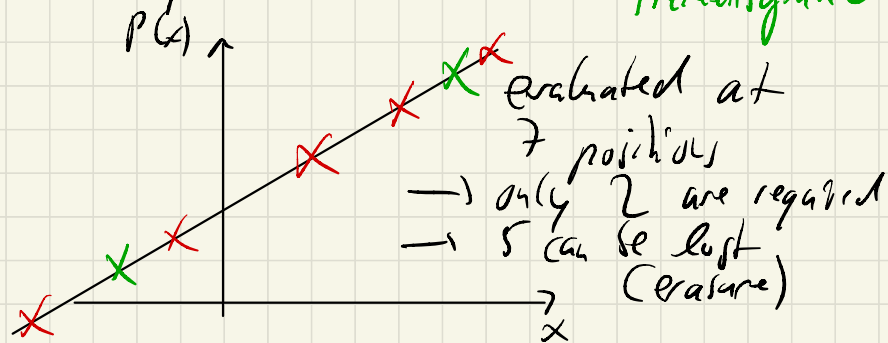
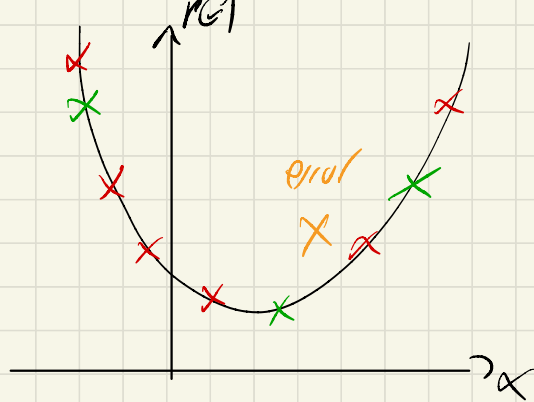


$P(x) = a_0 + a_1 x \rightarrow$  line 2 DOF  
(Degree of Freedom)  
Freiheitsgrade

Example: real numbers



$P(x) = a_0 + a_1 x + a_2 x^2$  3 DOF



$\rightarrow$  any 3 points will  
 allow for reconstruction  
 of original  $P(x)$   
 $\rightarrow$  interpolation

$$u_0 = 0, \quad u_1 = 1, \quad u_2 = 2 \quad \hat{=} \times \text{positions used for evaluating } P(x)$$

$$g_0(x) = (\cancel{x-0}) (x-1) (x-2)$$

$$g_1(x) = (x-0) (\cancel{x-1}) (x-2)$$

$$g_2(x) = (x-0) (x-1) (\cancel{x-2})$$