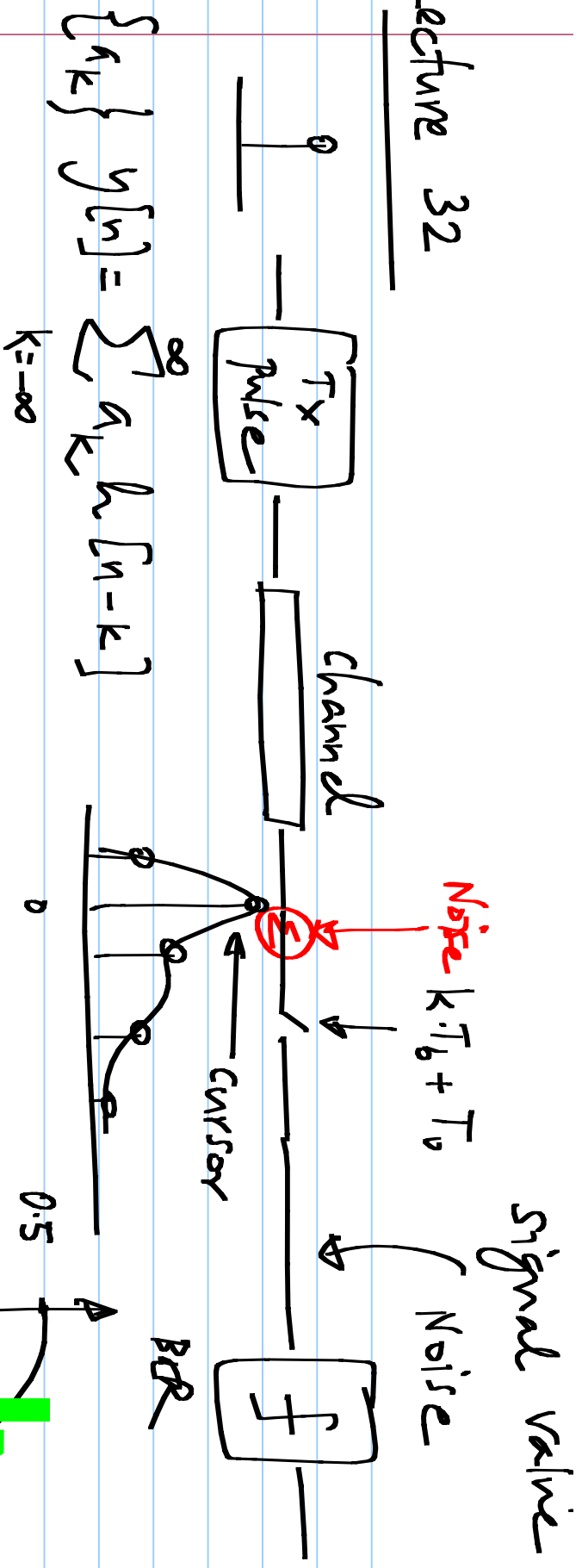


lecture 32



$$\{a_k\} \quad y[n] = \sum_{k=-\infty}^{\infty} a_k h[n-k]$$

$$= \underbrace{a_k \cdot h[0]}_{\text{desired}} + \sum_{k \neq n} \underbrace{a_k h[n-k]}_{\text{ISI}}$$

$$a_k = 1 = h[0] - \sum_{k \neq n} |h[n-k]|$$

$$\text{Received value} = a_k h[0] + \sum_{k \neq n} a_k \underline{h[n-k]}$$

@ n

$$a_k = 1 ;$$

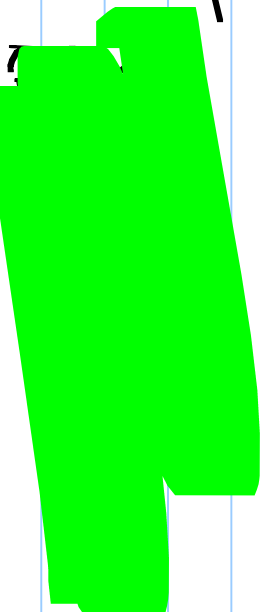
Many possible values depending on # of $h[n] \neq 0 : N$

Calculate BER
for each possibility
& average

$\left\{ \begin{array}{l} \text{equally} \\ \text{likely} \end{array} \right. \left[2^N \text{ possibilities for } N \text{ non-zero} \right]$
15 I in $h[n]$

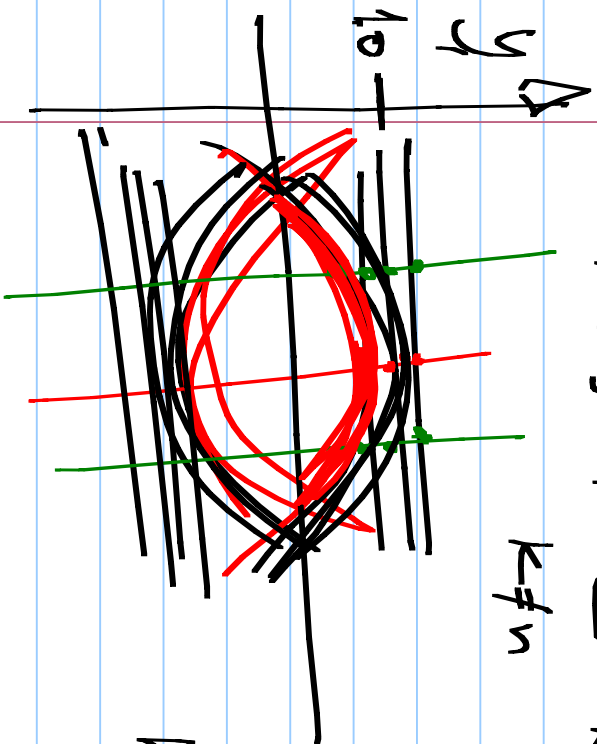
Simplification: worst case

$$h[0] -$$

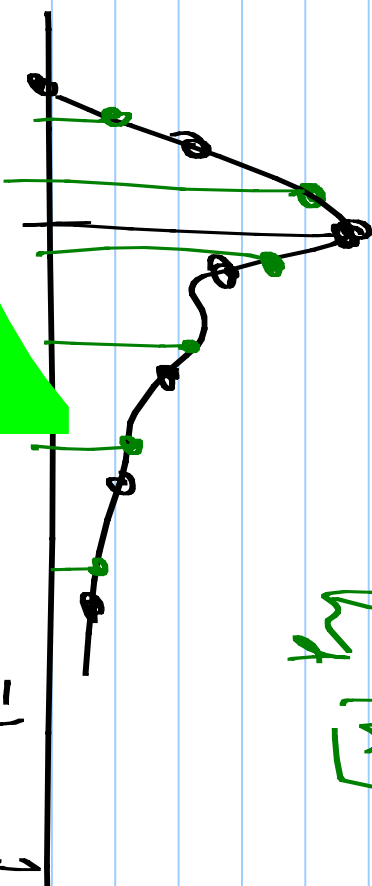


$$\frac{4}{5}$$

包,



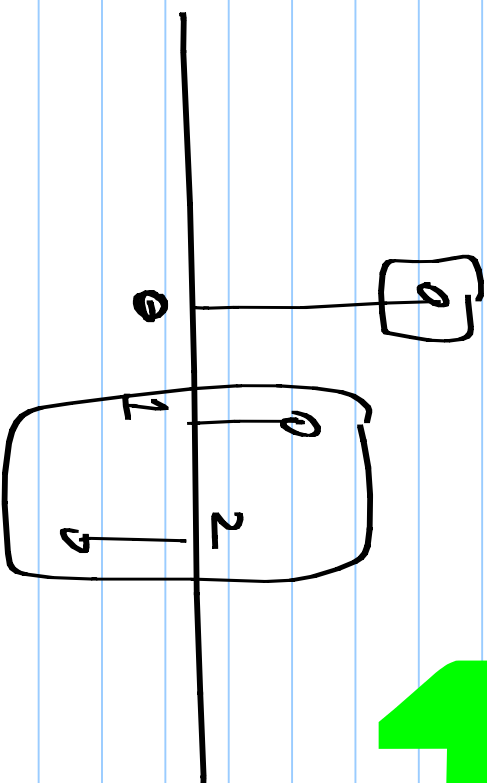
h[5]



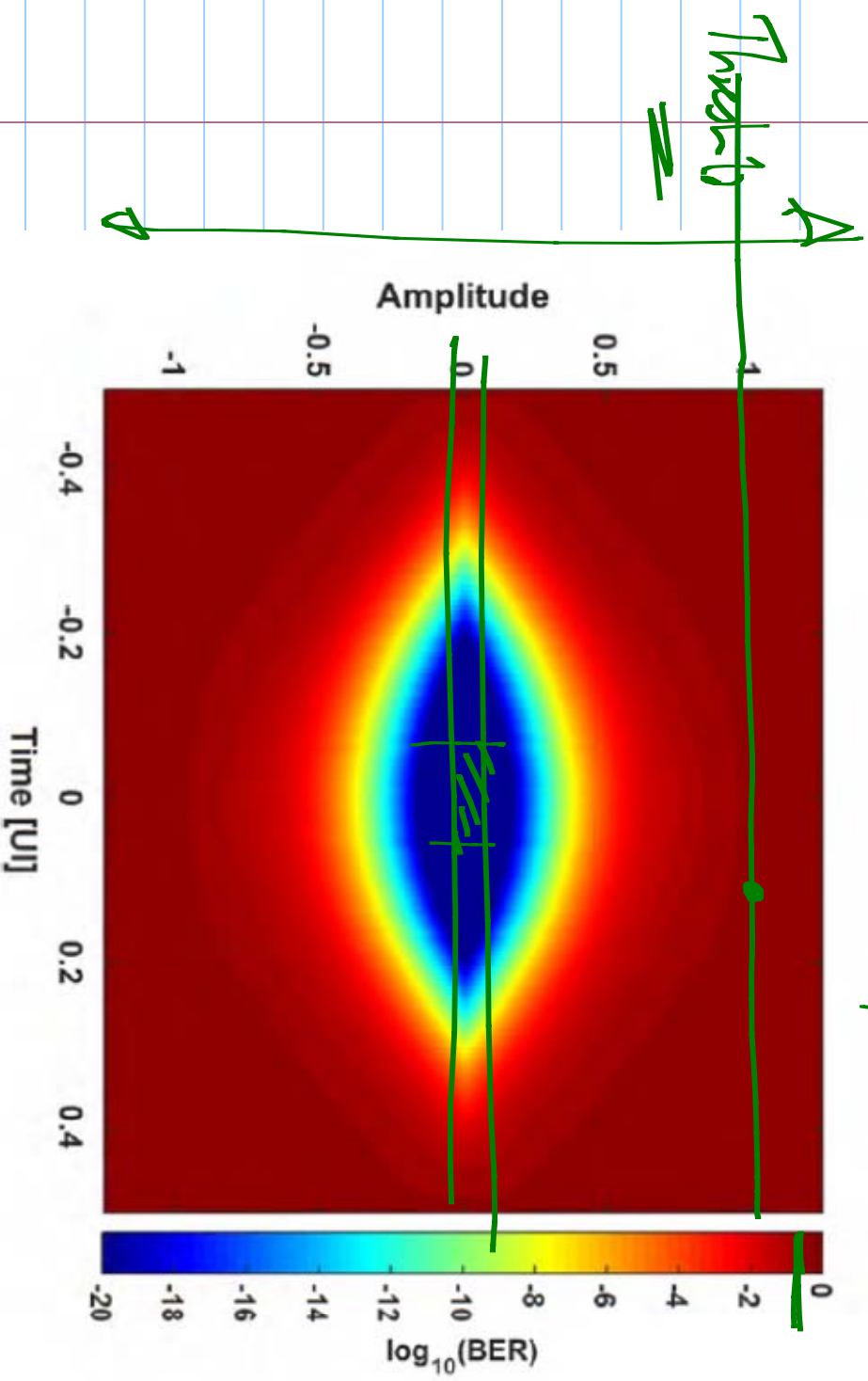
1- G_{k+1}

$$h_d[0] + s_{k+1} h_d[1]$$

$$G_{k+2} h_d[i_2]$$



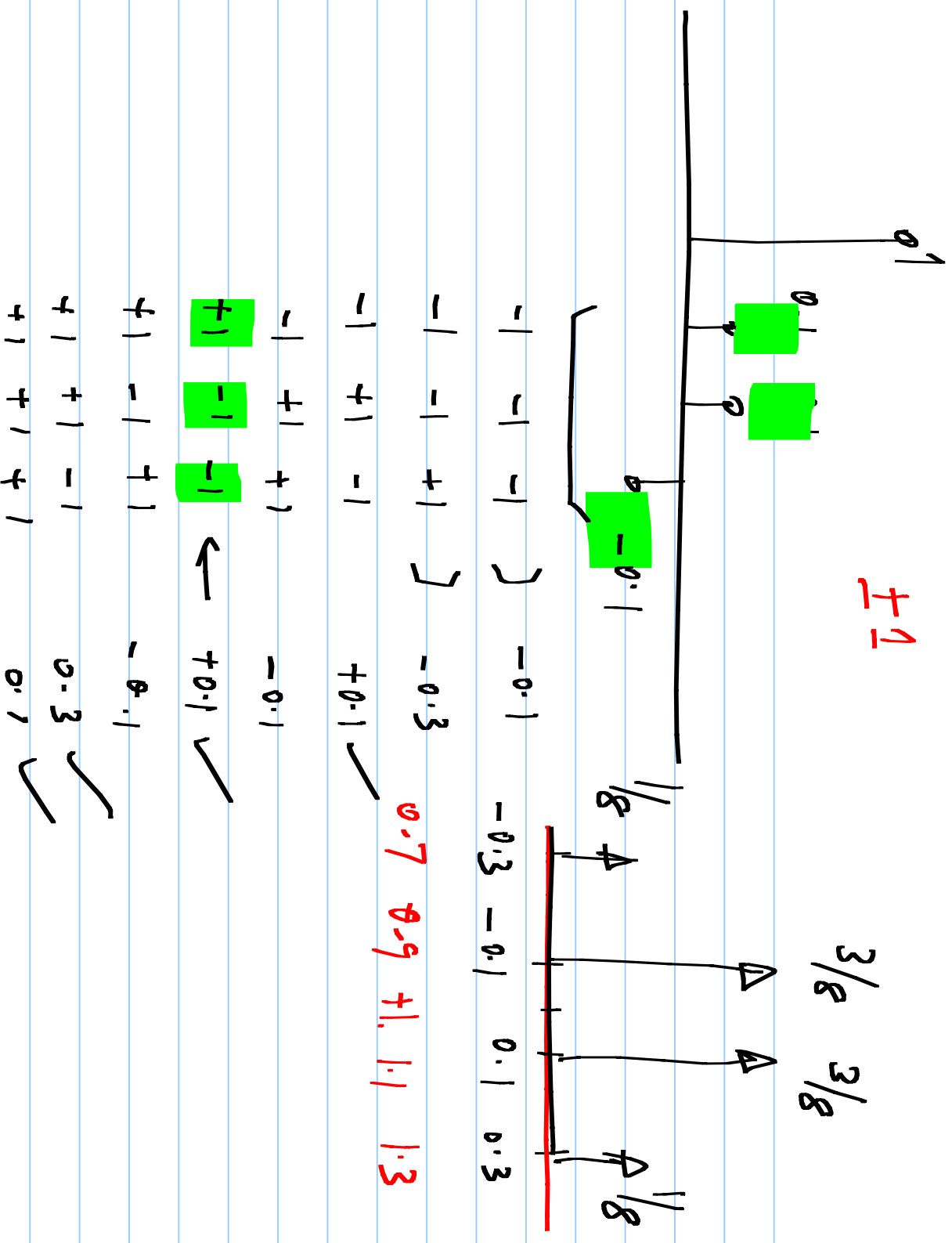
v-sampling phase



Threshold

1 period

14
12

$$\frac{3}{8}$$


1.0

-20dB

A_{Hk}



f_b

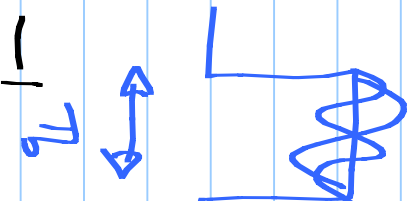
$2f_b$

f

1V_k

Alternating pattern:

100mV_pk



τ_b

