$0.45 = \frac{1}{n^{21}}$

$X_n \xrightarrow{P} 0$
$Y_n \xrightarrow[a.s]{} 0$

$X_n Y_n \xrightarrow[a.s]{} 0$

add light grey band

$n^{0.45} = n^{\frac{1}{2+n}}$

Thursday

$0.45 = \frac{1}{2+n}$ $\quad (2+n) = \frac{100}{45}$ $\quad$ 10 am

$f_n = I\left[\bigcup_{k} A_k\right]$ $\quad A_n$

$f_n = I[A_n]$

$A_k \uparrow \bigcup_n A_n$

$O(nB|\mathcal{H}|)$

$I[A_n] \uparrow I\left[\bigcup_n A_n\right]$ $\quad O(nB|\mathcal{H}|)$