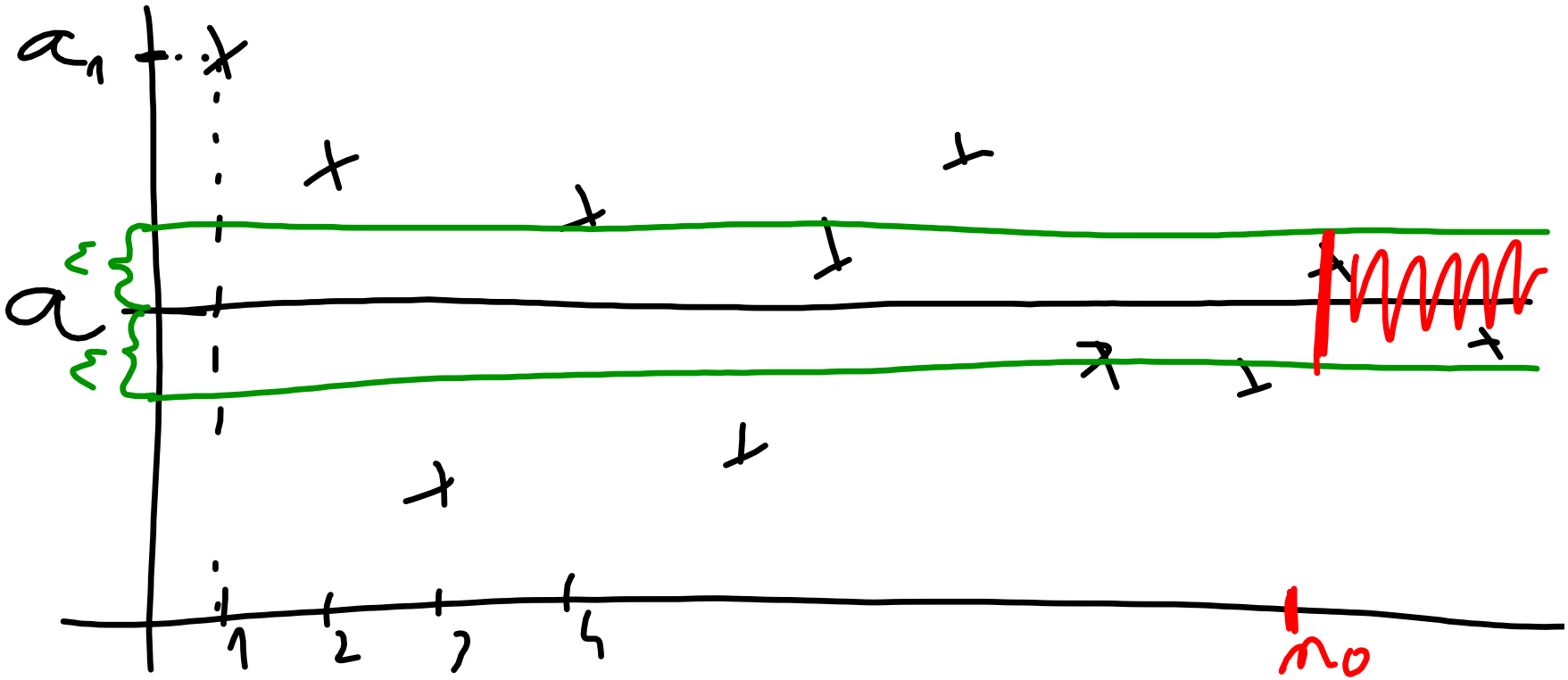
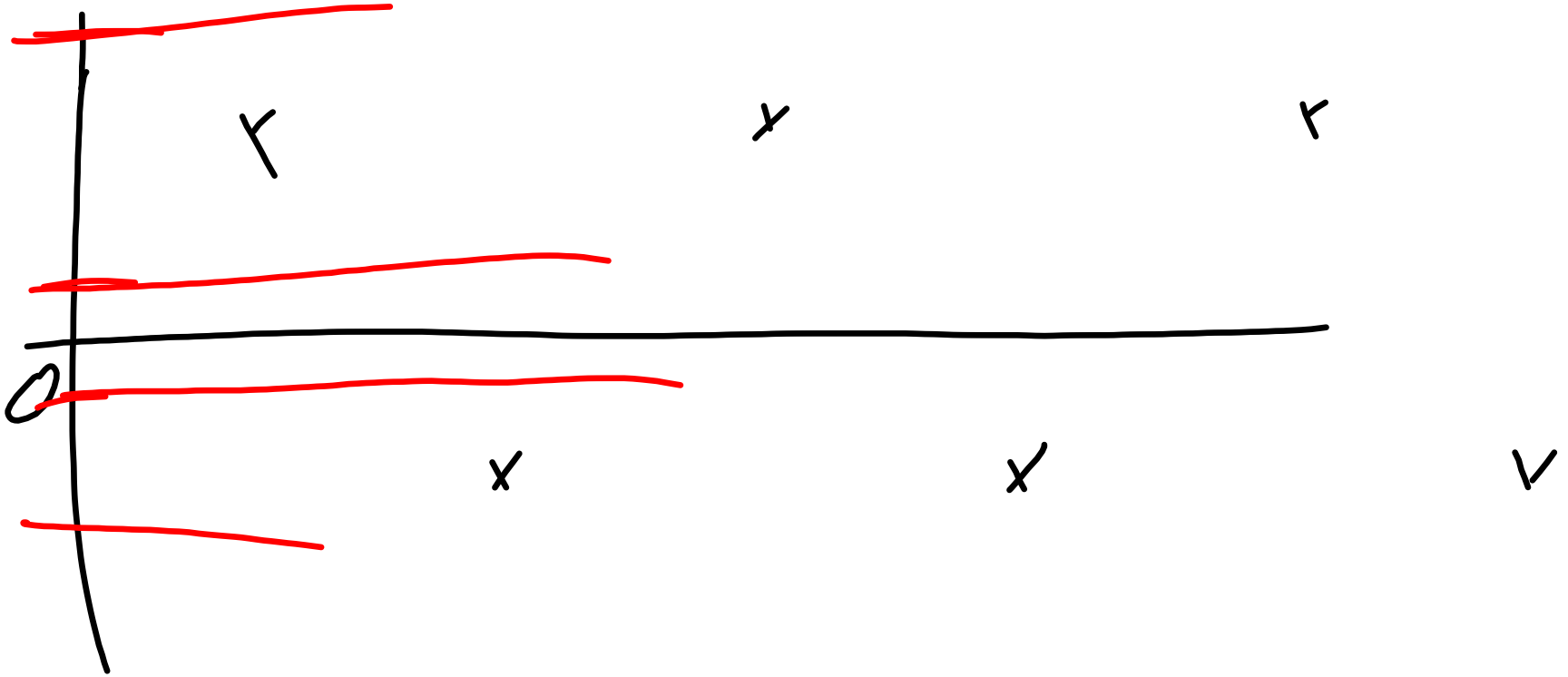
$f(x)$, $f(n)$, $a(n)$

$a_1, a_2, \ldots$


a1
a
1
2
3
4
n0

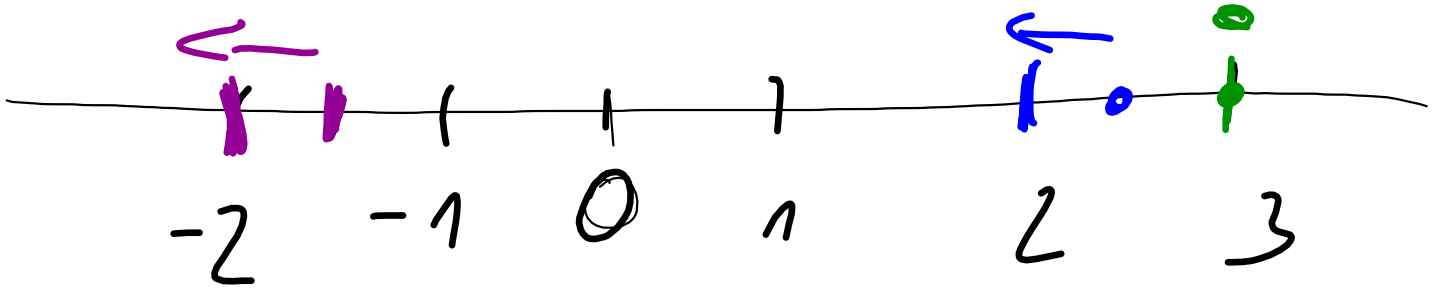


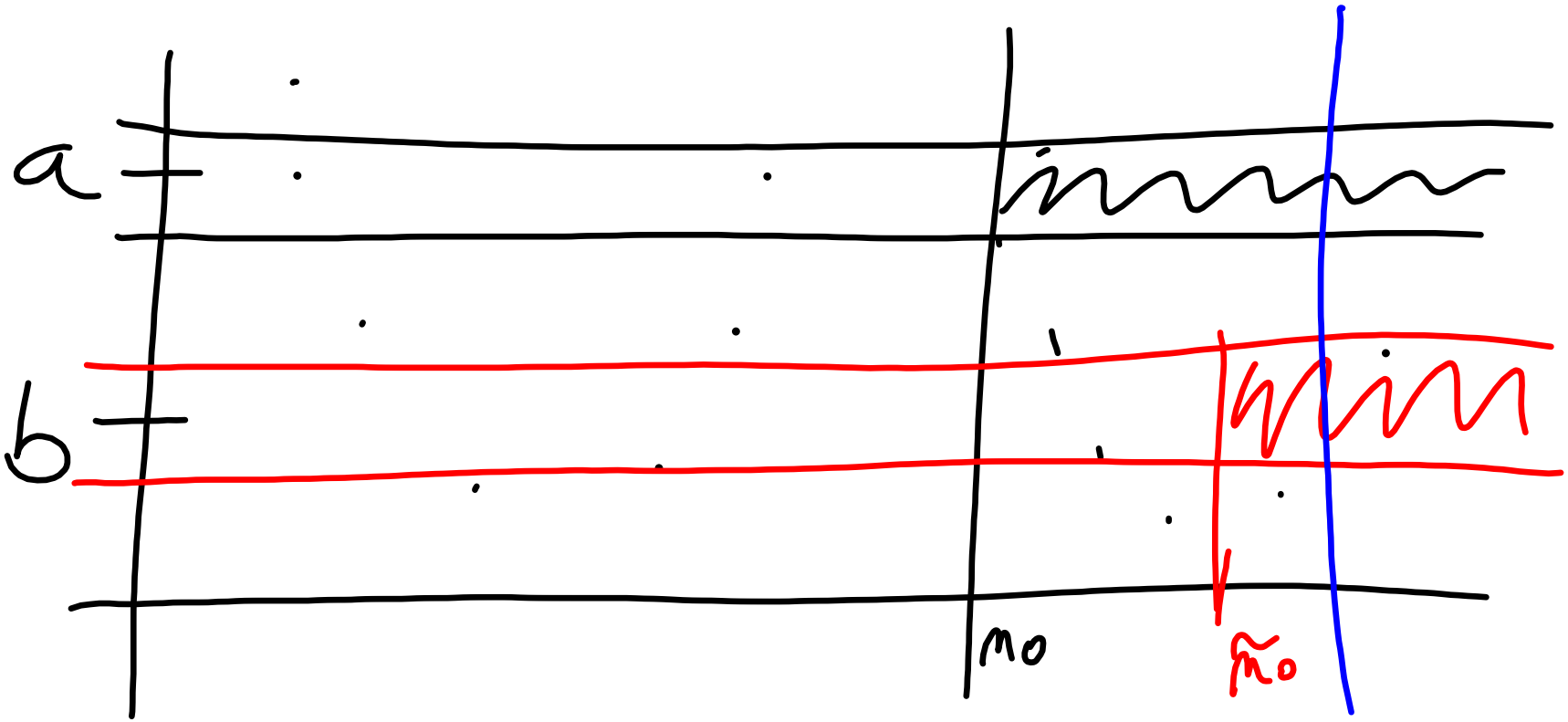
$\lfloor 3,2 \rfloor = 3$

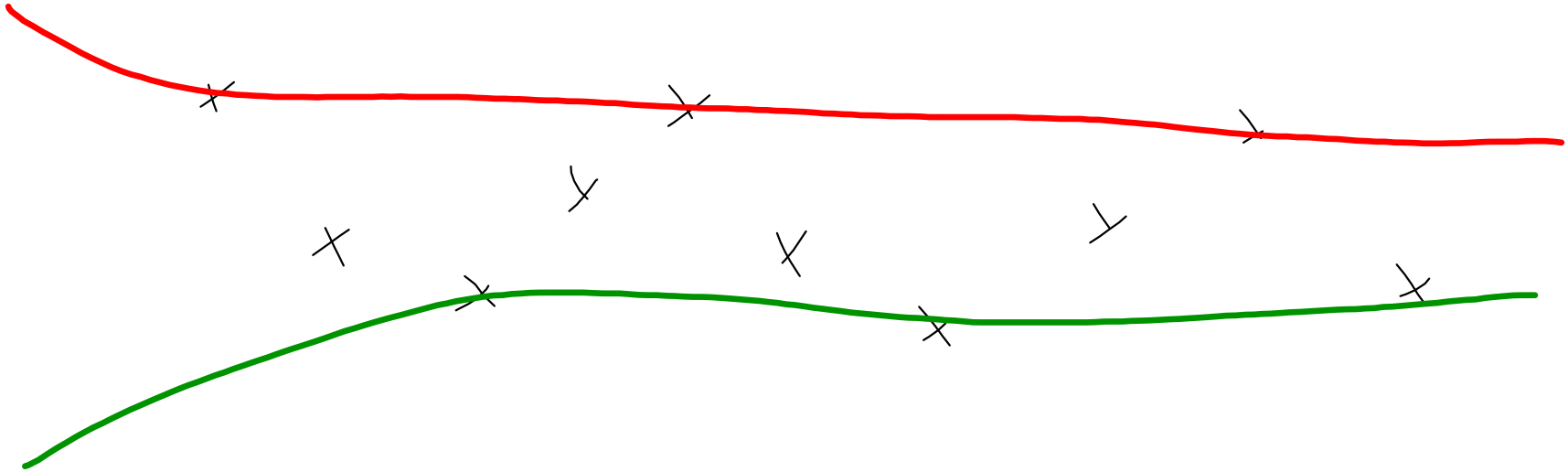
$\lceil 3,2 \rceil = 4$

$\lfloor -1,5 \rfloor = -2$

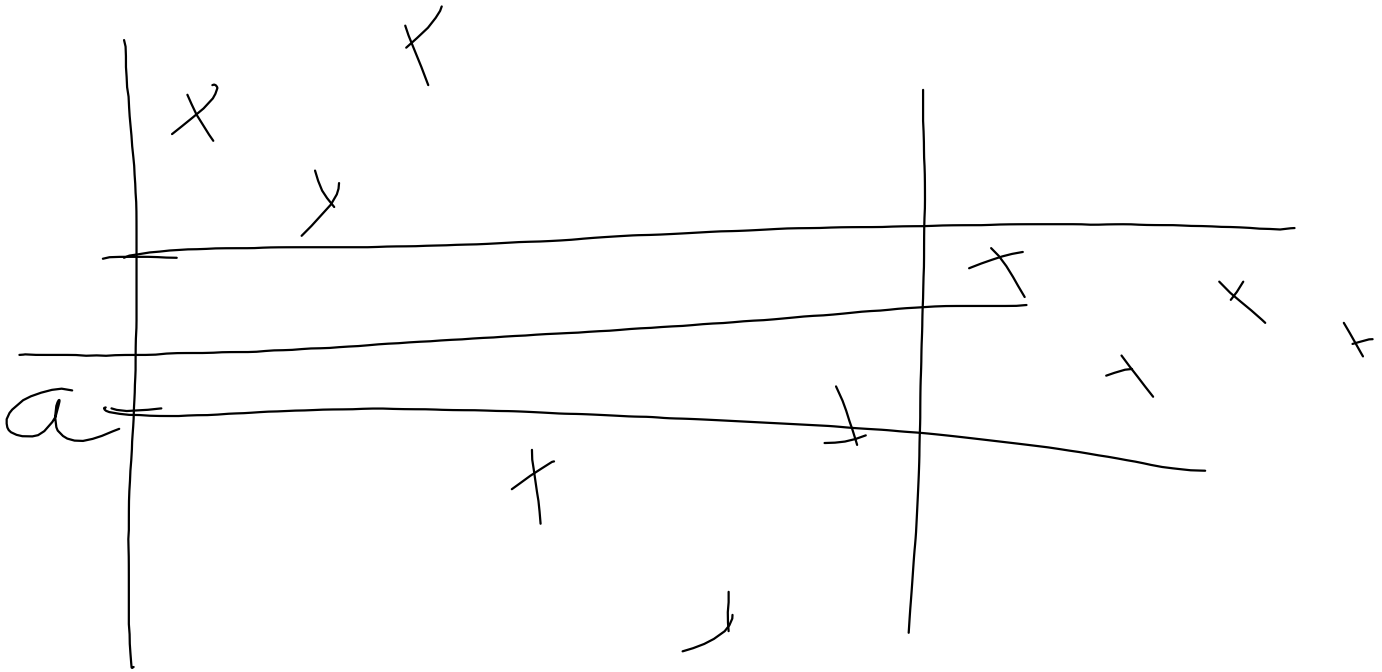
$\lfloor -\frac{3}{2} \rfloor$

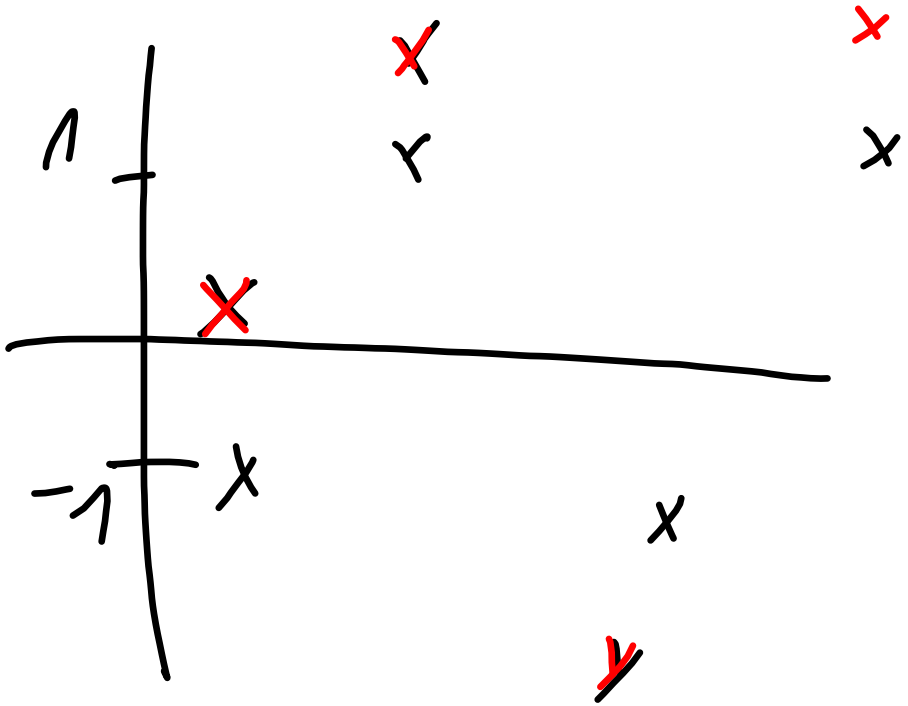

-2
-1
0
1
2
3


a
b
m0
m̃0



$$\lim (a_n + b_n) = \lim a_n + \lim b_n$$


a

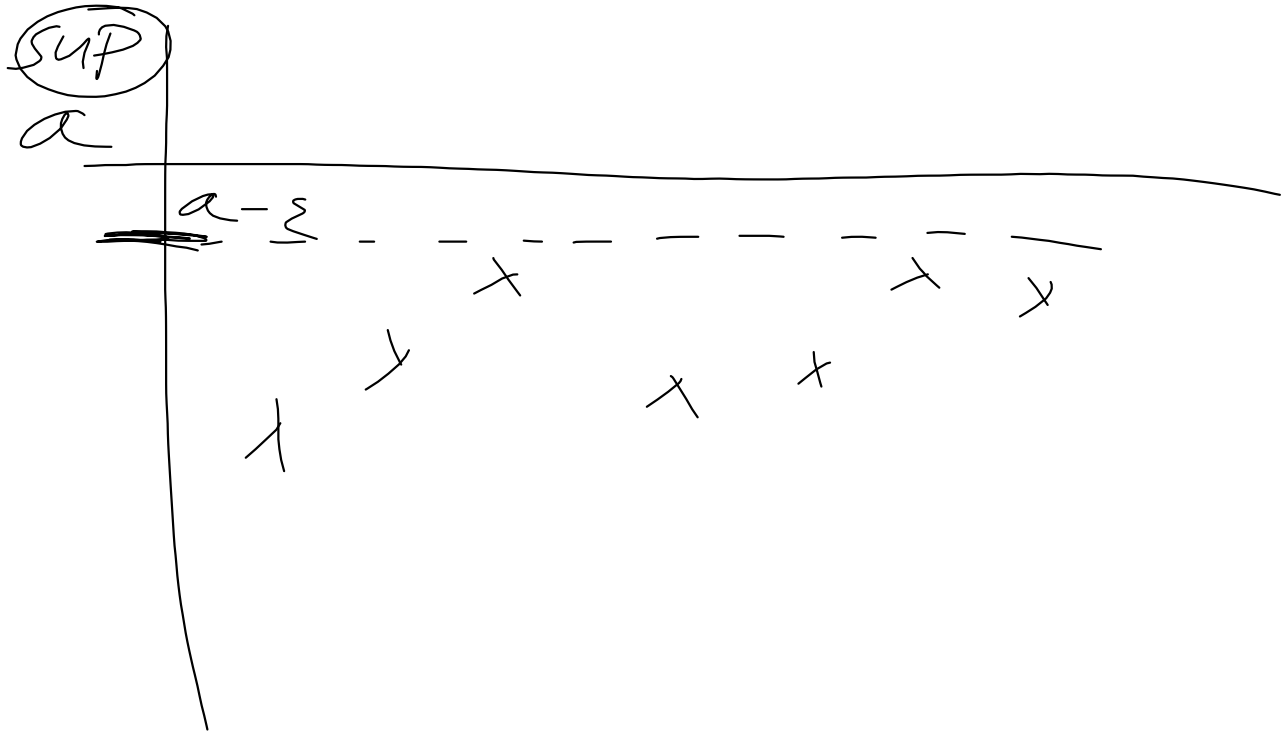


$(-1)^n$ vs. $(-1)^n \cdot n$

$$|5|+|3| = 8$$

$$|5+(-3)| = 2 < |5|+|(-3)|$$

$$|a_n| \leq M$$


sup
a
a - ε

$$\left(1+\frac{1}{n}\right)^n \longrightarrow e$$

$$(1+1)^1 = 2 \leq \left(1+\frac{1}{2}\right)^2$$

$$\left(1+\frac{1}{n}\right)^n$$

1000 Kč

2 · 1000 Kč

$$\left(\frac{n+1}{n}\right)^{n}$$

$$\left(\frac{(n-1)+1}{(n-1)}\right)^{n-1}$$

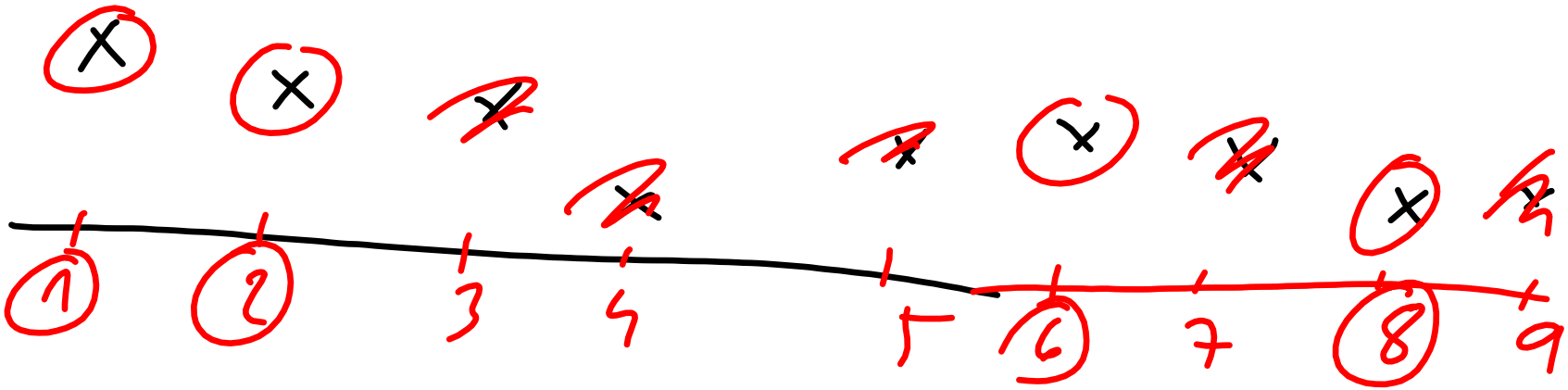
$$\left(\frac{n}{n-1}\right)^{n-1}$$

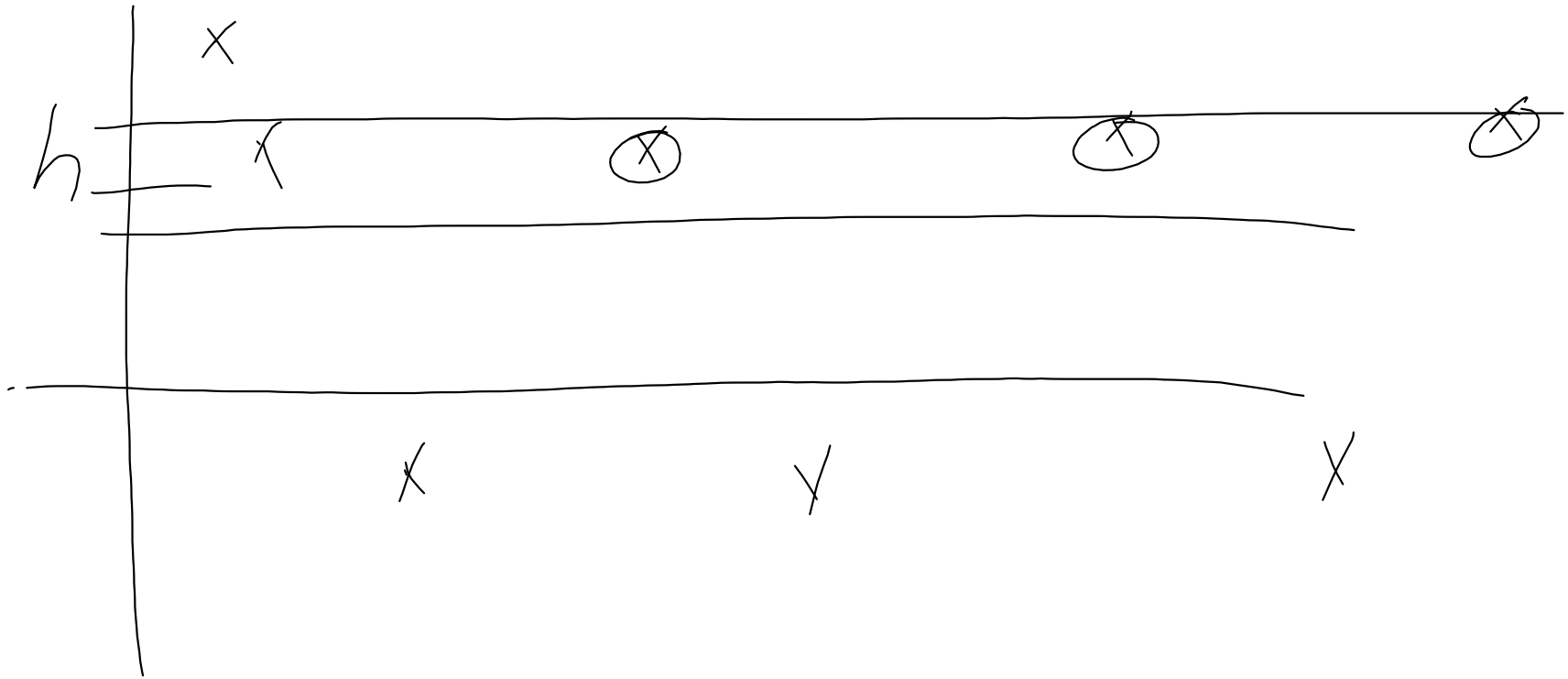

n
n-1
n
n-1

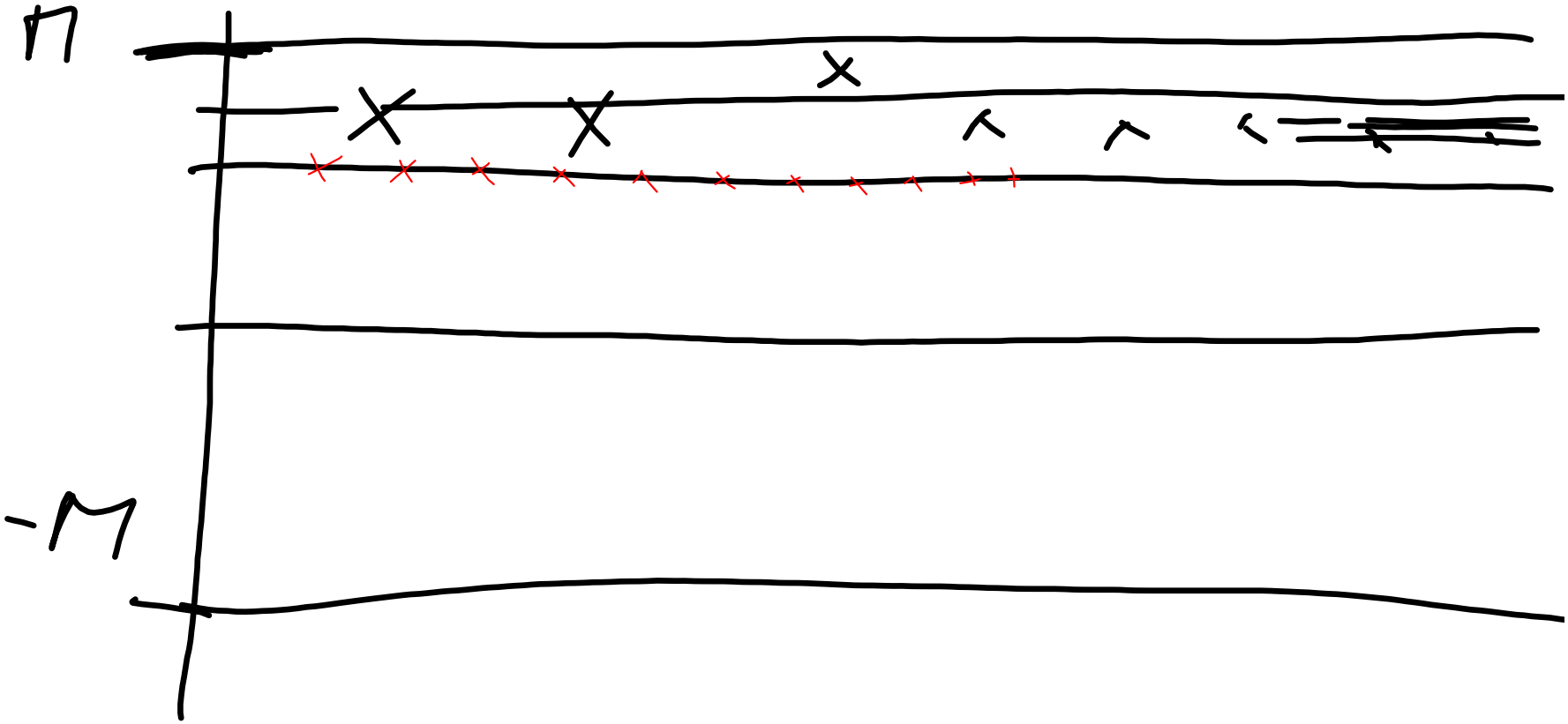
$$-\frac{1}{n^2}$$

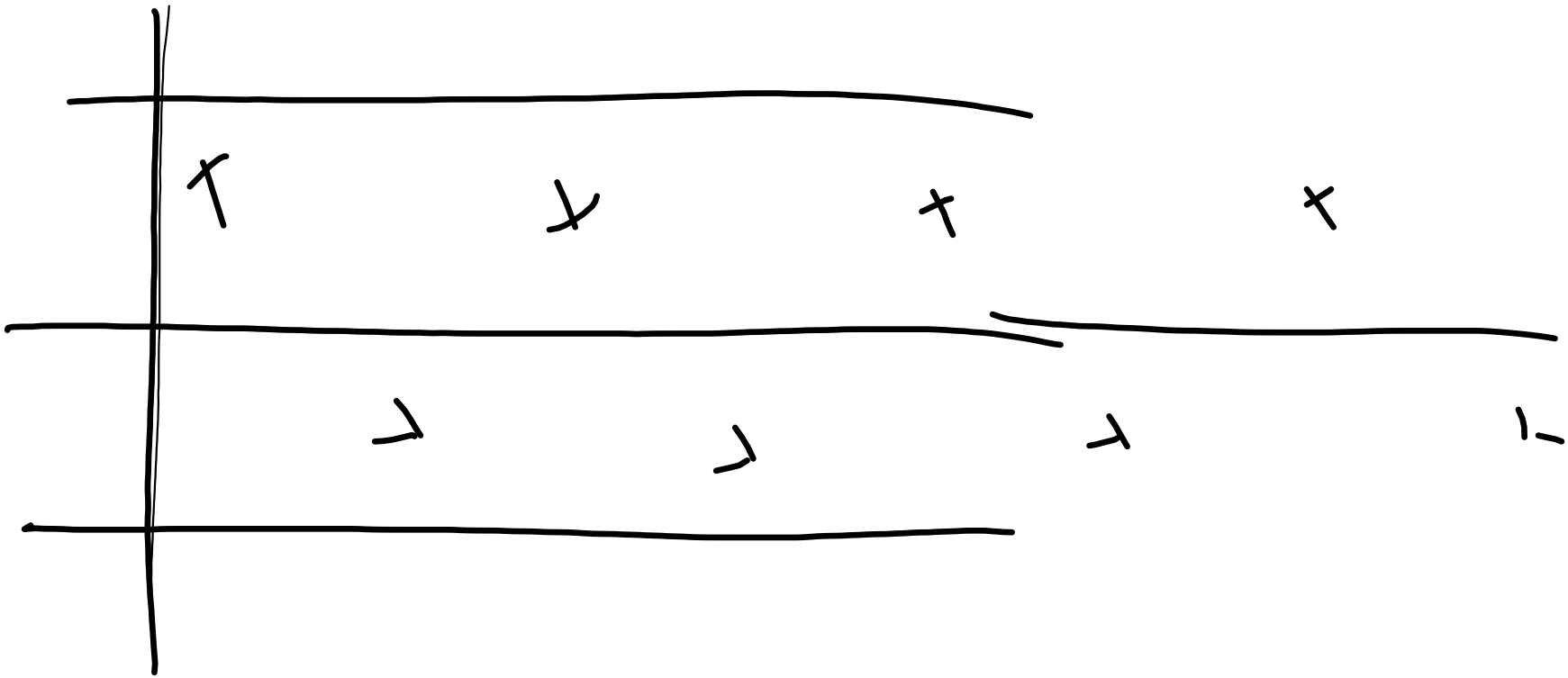
$n \to \infty$

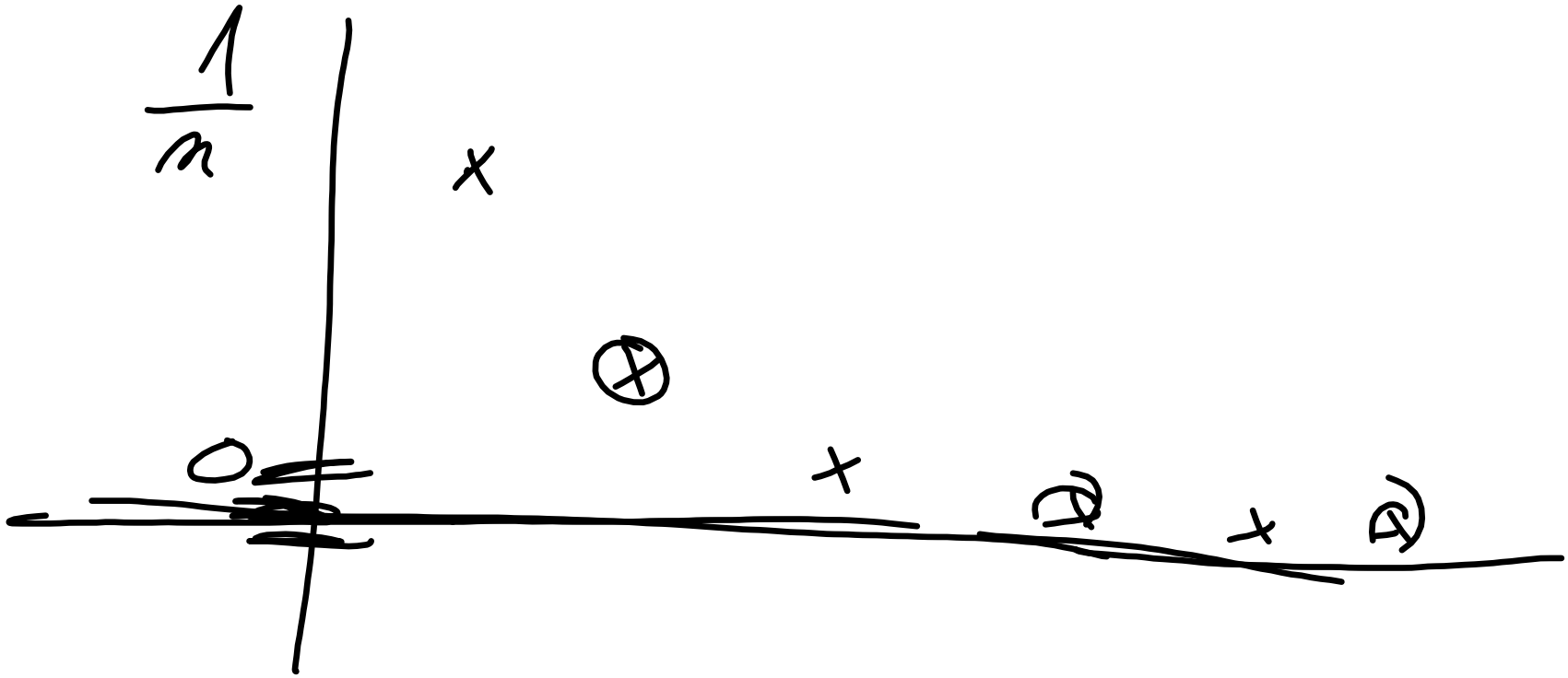
$$\left(1-\frac{1}{n^2}\right)^n > 1+n\cdot\left(-\frac{1}{n^2}\right)$$


1
2
3
4
5
6
7
8
9


h

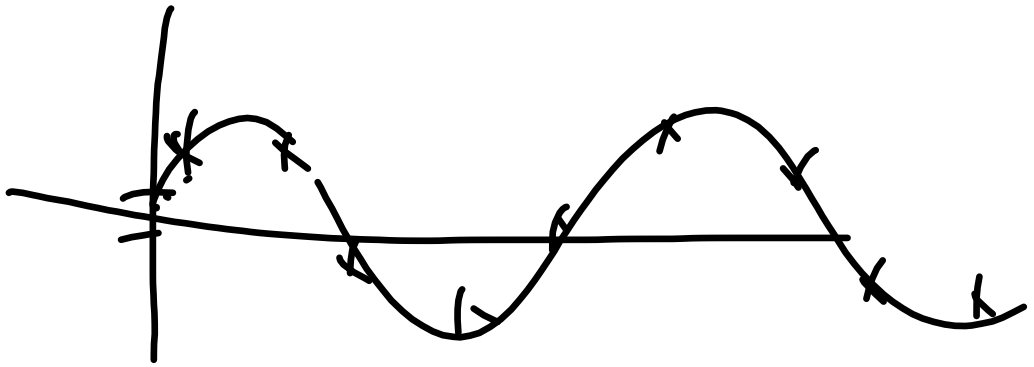

M
-M



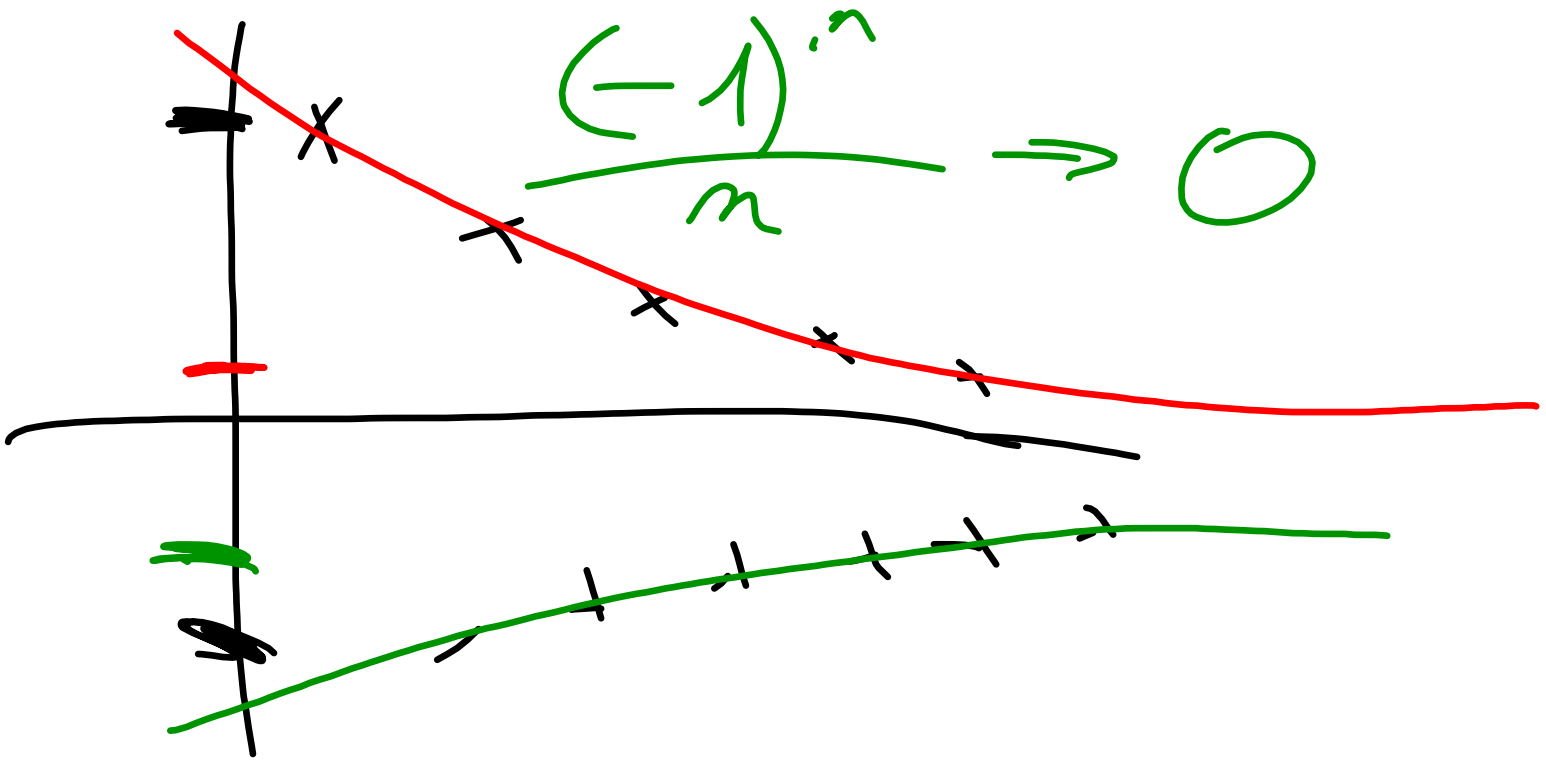

1
n
0

$\sin n$, $n \in \mathbb{N}_0$

$\sin 0 = 0$



$1, \frac{1}{2}, 1, \frac{1}{2}, \frac{1}{3}, 1, \frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \ldots$


$\frac{(-1)^n}{n} \Rightarrow 0$