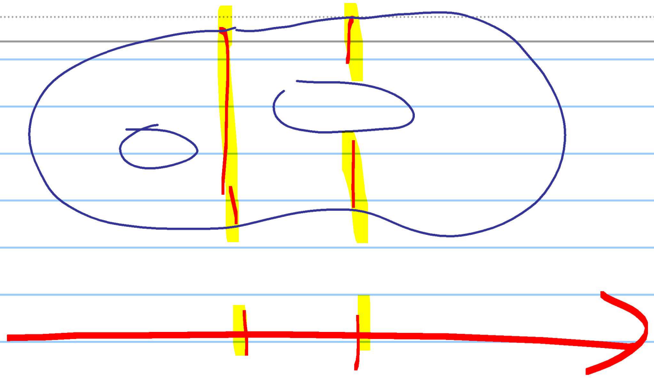
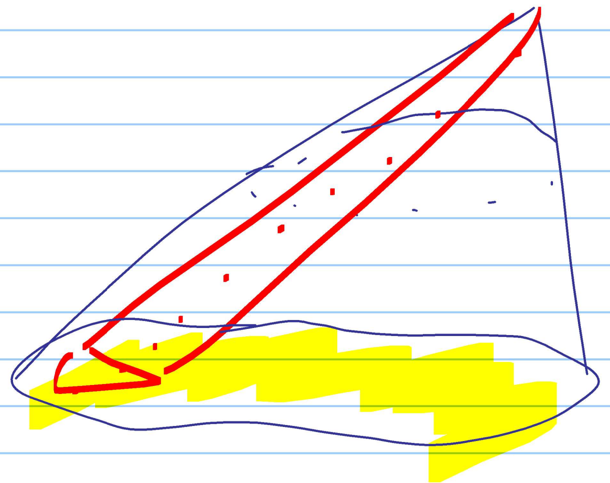
Note Title 19.10.2023

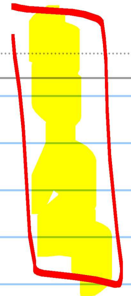


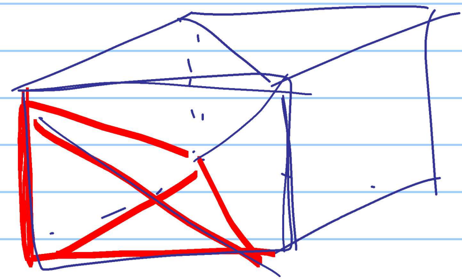


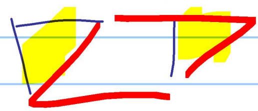
základna × výška

kužel =)

$\frac{1}{3}$ (základna × výška)







$$(1+x)^m = 1 + mx + \dots + x^m = \sum_{k=0}^{m} \binom{m}{k} x^k$$

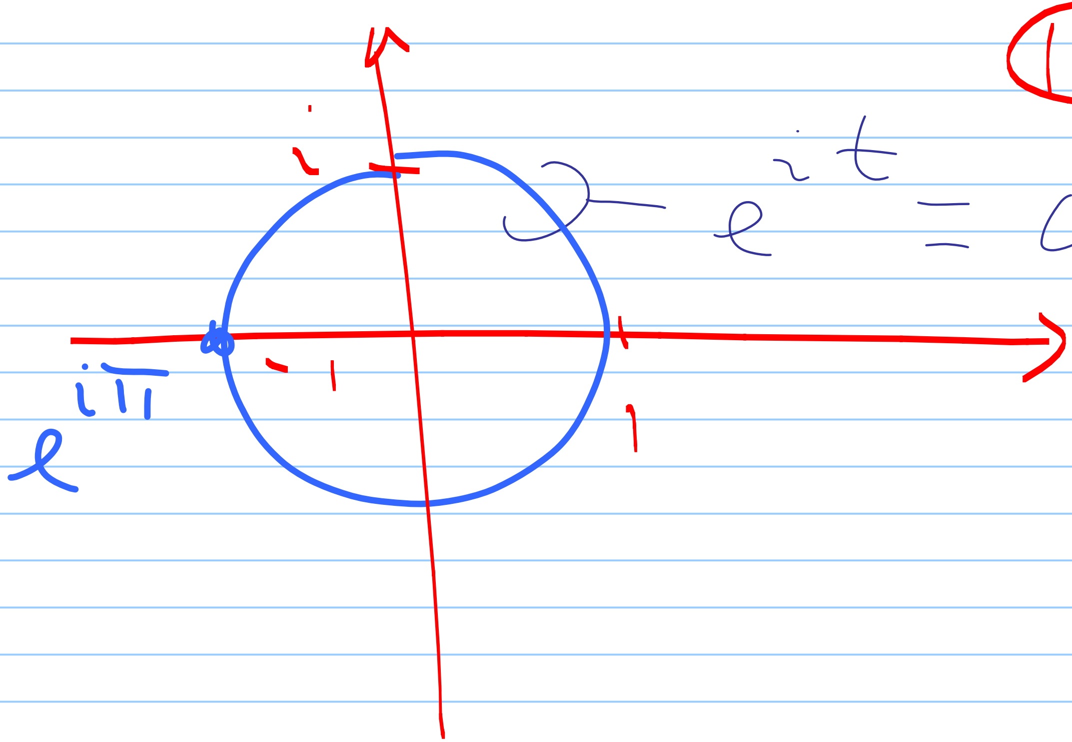
$$\binom{m}{k} = \frac{m(m-1)\cdots(m-k+1)}{k\cdot(k-1)\cdots 1}$$

$$(1+x)^a = \sum_{k=0}^{\infty} \binom{a}{k} x^k$$

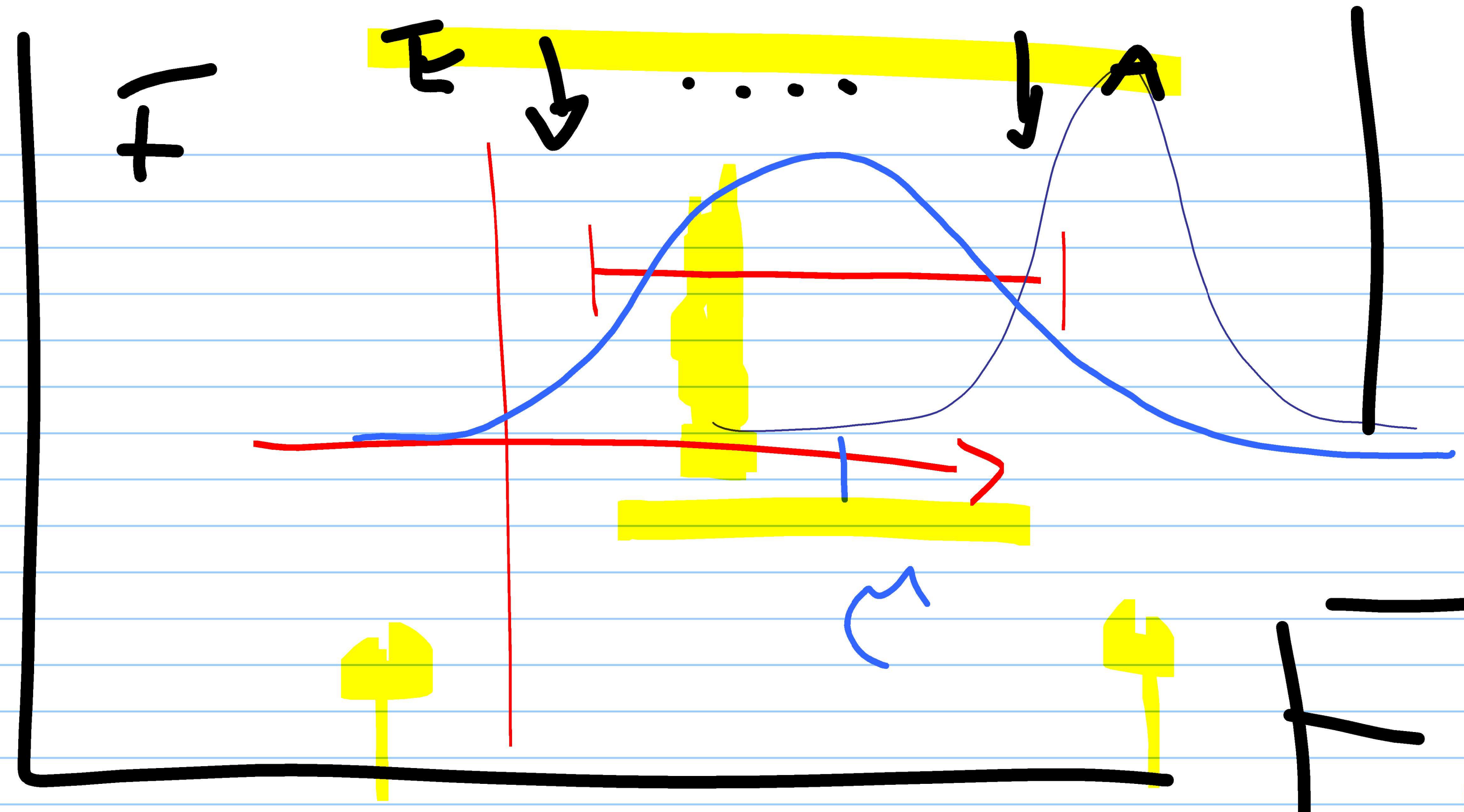
$a \in \mathbb{Q}$

0	1				
1	1	1			
2	1	2	1		
	1	3	3	1	
	1	4	6	4	1

$\mathbb{C} = \mathbb{R}^2$



$e^{it} = \cos t + i \sin t$


F
E
A


F E D C B A

$D \subset \mathbb{R}^n \xrightarrow{f} \mathbb{R}^m$

$a \qquad b$

$$b = \lim_{x \to a} f(x)$$

környezet bal

$$\boxed{a_n = \frac{1}{n} \xrightarrow{n \to \infty} 0}$$

pozlongmost

$\mathbb{R} \cup \{\pm\infty\}$

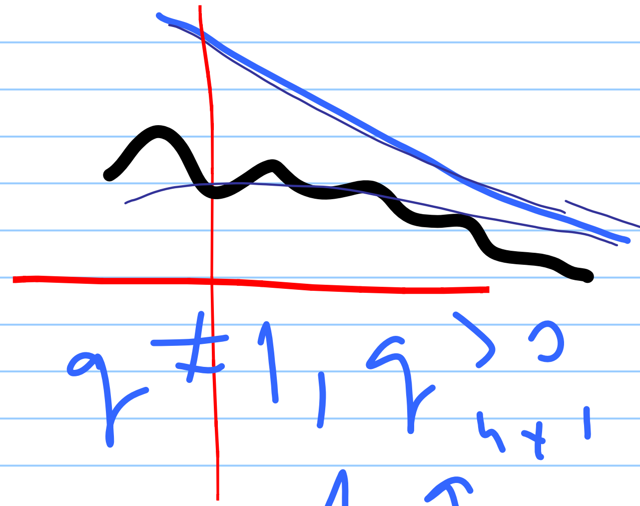
$$a_n : \mathbb{N} \to \mathbb{R}$$

$$\mathbb{N} \subset \mathbb{R}$$

$$S = \sum_{i=0}^{\infty} a_i \iff \lim_{n \to \infty} S_n = S \qquad S_n = \sum_{i=0}^{n} a_i$$

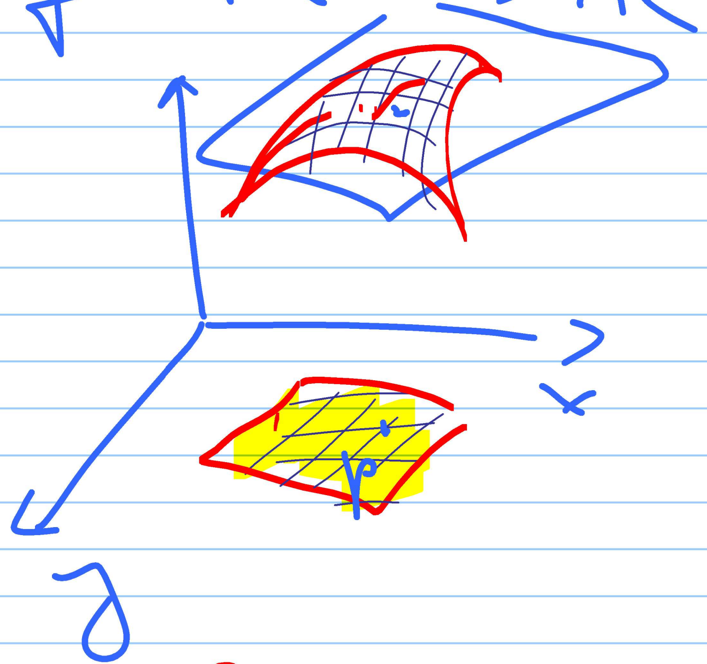
$$\boxed{S(x) = \sum_{i=0}^{\infty} a_i x^i}$$

$$R_q = \sum_{i=0}^{\infty} q^i \qquad q \neq 1,\ q_{n+1} > 0$$



$$(1-q)(1+\dots+q^n) = 1-q^{n+1} \Rightarrow r_n = \frac{1-q^{n+1}}{1-q} \Rightarrow R_q = \frac{1}{1-q}\quad q < 1$$

$f : \mathbb{R}^2 \to \mathbb{R}$



$$f(p+\delta) = f(p) + df(p)(\delta) + \alpha(\delta)$$

$$\lim_{\delta \to 0} \frac{|\alpha(\delta)|}{\|\delta\|} = 0$$

$f : \mathbb{R} \to \mathbb{R}$

$$df(p)(\delta) = f'(p) \cdot \delta$$

$$y_{n+1} = (1+r)\,y_n$$

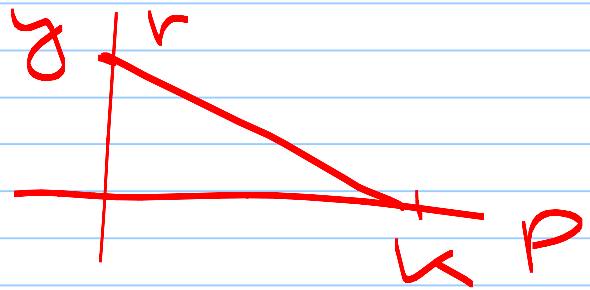
mi a nő's?

$$y_n = y_0 \cdot r^n$$

$$\frac{y_{n+1} - y_n}{y_n} = r \qquad y_{n+1} - y_n = \Delta p, \quad y_n = p$$

$$y' = ry \qquad y = y_0 e^{rx}$$

$$y_n = \frac{\Delta p_n}{p_n} \quad \text{lineáris}$$



$$y = -\frac{r}{K}p + r \Rightarrow \frac{p_{n+1} - p_n}{p_n} = -\frac{r}{K}p + r$$

logisztikus modell