Kombinatorika

DEF Kombinační číslo $\left(_{k=\frac{n}{n!}{k!(n-k)!}}\right)$

- $\binom{n}{k} = \binom{n-k}{k}$
- $\binom{n-1}{k} = \binom{n-1}{k} + \binom{n-1}{k-1}$

THM Binomická věta:

$$(a-b)^n = \sum_{i=0}^{n} \binom{n}{i} a^i b^{n-i}$$

THM Princip Inkluze a exkluze

$$|\bigcup_i A_i| = \sum_{k=1}^{n} (-1)^{k+1} \sum_{I \in \binom{|n|}{i}} |\bigcap_{i \in I} A_i|$$