Combinatorics Symbols

Symbol	Symbol Name	Meaning / definition	Example
$n!$	Factorial	$n! = 1 \cdot 2 \cdot 3 \cdot \ldots \cdot n$	$5! = 1 \cdot 2 \cdot 3 \cdot 4 \cdot 5 = 120$
${}_nP_k$	permutation	${}_nP_k = \frac{n!}{(n-k)!}$	${}_5P_3 = 5! / (5-3)! = 60$
${}_nC_k$ $\binom{n}{k}$	combination	${}_nC_k = \binom{n}{k} = \frac{n!}{k!(n-k)!}$	${}_5C_3 = 5!/[3!(5-3)!]=10$