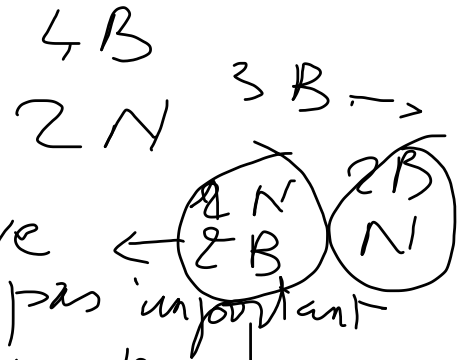


1, 2, 3, 4

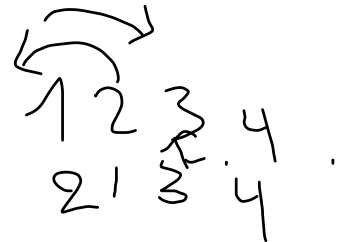


On choisit 4 parmi 4.  $n = k = 4$ .  
permutation.

Choisir 3 parmi 4.  $k = 3, n = 4$ .  
Arrangement

Ordre.

Ordre  
important.



# Abolition d'ordre

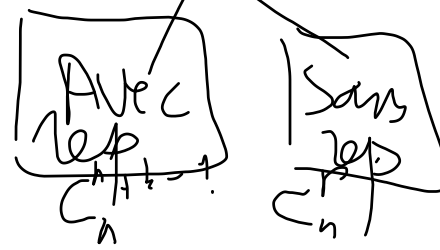
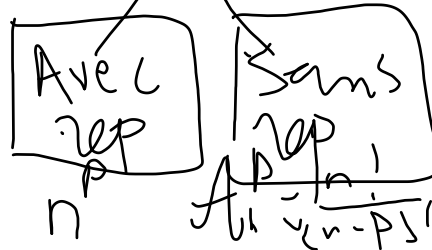
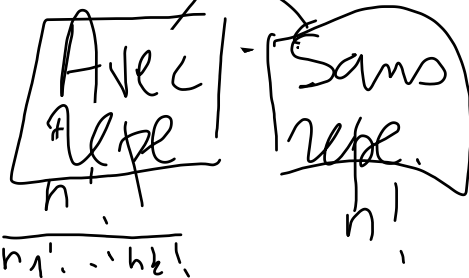
Deri

Non

Permutation  
 $n = p$

Arrangement  
 $p < n$   
 $n! \cdot \frac{n!}{n!}$

Combinaison  
 $p < n$



$$F_X(x) \rightarrow$$

$$x < k_1$$

$$\begin{aligned} F_X(x) &= P(X \leq x) \\ &= \sum_{k \leq k_1} P(X = k) \\ &= 0 \end{aligned}$$

$$k_1 \leq x \leq k_2$$

$$k_2 < x < k_3$$

$$\begin{aligned} x &\geq k_n \\ x &< k_{n+1} \end{aligned}$$

$$F_X(x) =$$

$$F_X(x) = \sum_{k \leq k_2} P(X = k) = P(X = k_1) = \dots$$

$$F_X(x) = P(X = k_2) = P(X = k_1) + P(X = k_2)$$

$$\sum_{k \leq k_{n+1}} P(X = k) = P(X = k_1) \dots P(X = k_n) = 1$$

$$P(X = k_i) =$$

$k$	$k_1$	$k_2$	$k_3$	$k_n$
$P(X = k)$	.	.	.	.

$$\sum_{k \in k(n)} P(X = k) = 1$$