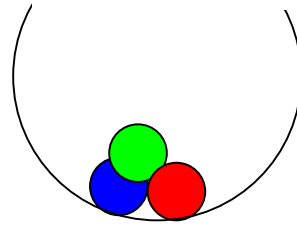


Kombinatorik



N Kugeln
n Ziehungen

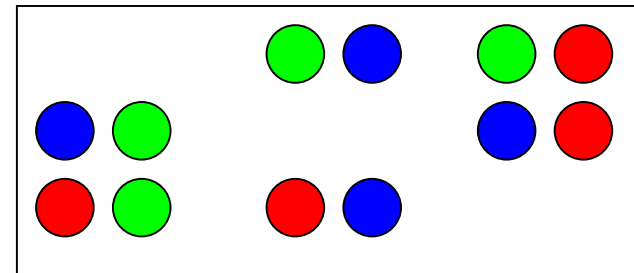
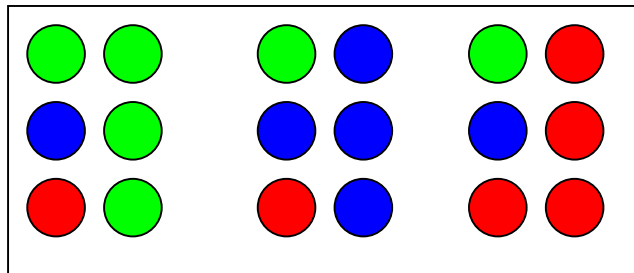
Beispiel:

n = 2 N = 3

mit Zurücklegen

ohne Zurücklegen

**Geordnete
Stichprobe**

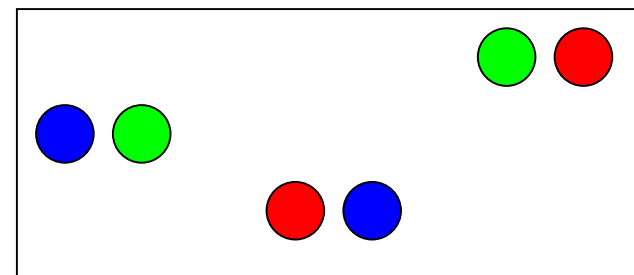
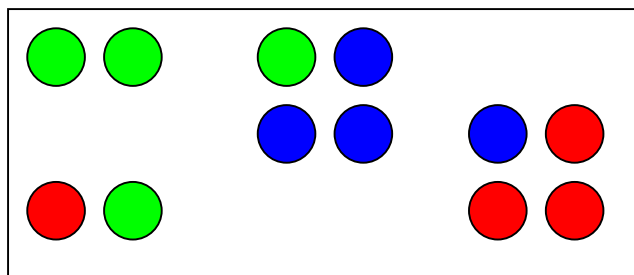


$$N^n = 3^2 = 9$$

$$n \cdot (n-1) \cdot \dots \cdot (n-N+1) = 3 \cdot 2 = 6$$

Sonderfall: N = n: n!

**Ungeordnete
Stichprobe**



$$\binom{N+n-1}{n} = \binom{3+2-1}{2} = 6$$

$$\binom{N}{n} = \binom{3}{2} = 3$$