?
?
$(\Omega, \mathcal{F}, P)$
$n \in$
N
$X_1, X_2, \dots, X_n$
$X_i \in$
$\{0, 1\}$
$X_i =$
1
den
Fall
nach
rechts
i
$X_i =$
0
den
Fall
nach
links
$P(X_i =$
$1) =$
p
$P(X_i =$
$0) =$
$1-$
$p =$
q
$p =$
$q =$
0.5

X_i
X_i
$\Omega = \{1, 0\} und P(X_i = x) = \{ p \; wenn x = 1 1-p wenn x = 0$

$X_i \sim$
$\mathcal{B}_p$
S_n
S_n
?
$k \in$
$\{0, 1, \dots, n\}$

$$S_n = \sum_{i=1}^{n} X_i$$

?
$n \in$
N_0
$k \in$
$\{0, \dots, n\}$
Bi-
no-
mi-
alko-
ef-
fizien-
ten

$$nk = \frac{n!}{k!(n-k)!}$$

nk
n
k
S_n
n
k
$(n-$
$k)$
$p^k(1-$
$p)^{n-k}$
k
?
$p \in$
$[0, 1]$
n
$A = \{0, 1, ..., n\}.$

$$Bin_{n,p}(\{k\}) := nkp^k(1-p)^{n-k}, k = 0, 1, .., n$$

$A =$
S_n
?
$Bin_{n,p}(\{k\})$
$\{0, ..., n\}$
n, p
S_n
$S_n \sim$
$\mathcal{B}in_{n,p}$
S_n
n
$X_i \sim$