SPAB ass II

① Bernoulli r.v, success prob p, n observations $x_i \in \{0,1\}$ i.i.d. $i=1,...,n$

estimator $\hat{\delta}(x_1,...,x_n) = \frac{1}{n} \sum_{i=1}^{n} x_i$

1) Compute and sketch the risk function $\hat{\delta}_1$ for each $p \in [0,1]$. quadratic loss

$R(\hat{\delta}, p) = E_p[L(p, \hat{\delta}_n(x))]$

$= E_p[(d-p)^2]$ $d = \frac{1}{n} \sum_{i=1}^{n} x_i$ distr. ?

$= E_p[(\frac{1}{n} \sum x_i - p)^2]$

$= \underbrace{x}_{?}$ $\underbrace{\text{mean of Bernoulli}}$

→ then it would be the variance (as we used it in the lecture)

sry kann das Blatt vorm Wurf
nicht finden