

n and p

↓
Binomial

↓
 n is small
($n \leq 20$)

$n =$

$p =$

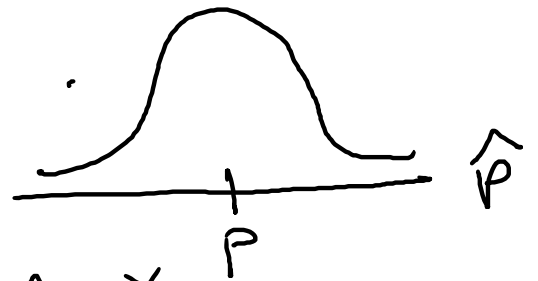
$X = 0, 1, 2, \dots, n$

$$P(X=k) = \binom{n}{k} p^k (1-p)^{n-k}$$

↓
 n is huge
($n \geq 100$)

\hat{p} bell curve

\hat{p} is approximately normal



$$\hat{p} = \frac{X}{n}$$

Mark \hat{p} and shade the appropriate region

$$z = \frac{\hat{p} - p}{\sqrt{\frac{p(1-p)}{n}}}$$