

(POPULATION PROPORTION)  
(PARAMETER)

ESTIMATE PROPORTION  $p$  OF PEOPLE THAT APPROVE OF A POLICY.

SAMPLE  $n$  INDIVIDUALS & COUNT  $x$  THAT APPROVE.

ESTIMATOR:  $\hat{p} = \frac{x}{n}$

(SAMPLE PROPORTION)  
(STATISTIC)

$x$  IS BINOMIAL RANDOM VARIABLE.

MEAN  $\mu = np$

STAND. DEV.  $\sigma = \sqrt{npq}$

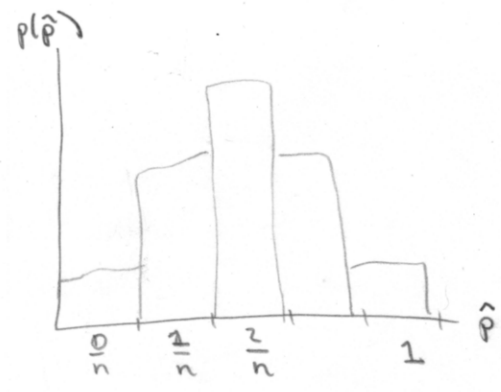
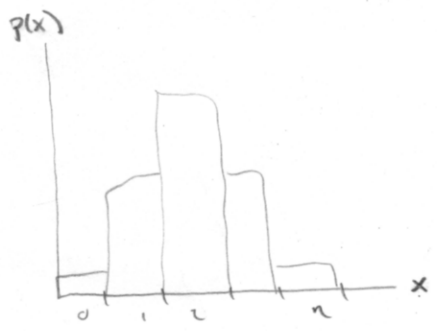
DIV BY  $n$

THE DISTRIBUTION OF  $\hat{p}$  IS THE SAME BUT SCALED BY  $\frac{1}{n}$ .

MEAN  $p$

S.E.  $\sqrt{\frac{pq}{n}}$

(S.E. ( $\hat{p}$ ))



APPROXIMATED NORMAL WHEN  $np > 5$   
 $ng > 5$

EXAMPLES.

7.47