

$$\underline{231} \quad \hat{p} = \frac{x}{n} \quad V(\hat{p}) = \frac{p(1-p)}{n}$$

$$V(\hat{p}) = V\left(\frac{x}{n}\right) = \frac{1}{n^2} V(x)$$

$$= \frac{1}{n^2} \cdot np(1-p) = \frac{p(1-p)}{n}$$

* Since x is a binomial rv w/ p & n params
we know that $V(x) = np(1-p)$