One Set

Binomial

From Central Limit Thm

proportion in the group vs not in group

measuring population proportion p ← Population Parameter

sample proportion $\hat{p}$

Expected value / mean: p

Standard deviation: $\sqrt{\frac{p(1-p)}{n}}$

You can use ↑ if

- $np \geq 10$ and $n(1-p) \geq 10$

$n < 10\%$ of population size

Non binomial

population parameter

sample

Measuring for [illegible] statistic

using sample mean $\bar{x}$

mean of sampling dist is μ

standard dev. of sampling dist. of means $\frac{\sigma}{\sqrt{n}}$

cond: $n > 30$ and $n < 10\%$ population size

(1) $p = 4\%$ $\hat{p} = 7\%$

$n = 1000$

Produce soda w/ caffeine

$\mu = 375mL$ $\bar{x} = 500mL$

$\sigma = 7$ mL

and sample mean

We are interested in the standard deviation of the caffeine content in a box of 36 cans

$\uparrow$ avg

in our sample of 36 cans

$\rightarrow$ avg caffeine content is 500 mL