# Selecting Confidence Interval/ Hypothesis Test Inference Procedures

mean/average
$\mu$

proportion/percentage
p

one mean
$\mu$

thtee or more means
$\mu_1, \mu_2, ... \mu_n$
ANOVA

two proportions
$p_1, p_2$
2 prop. z-test/int
$p_1 - p_2$

one proportion
p
1 prop. z-test/int

$\sigma$
known
z-test/int

$\sigma$
unknown
t-test/int

two means
$\mu_1, \mu_2$

dependent samples
$\mu_d$

t-test/int

independent samples
$\mu_1 - \mu_2$
2 samp t-test/int
not pooled
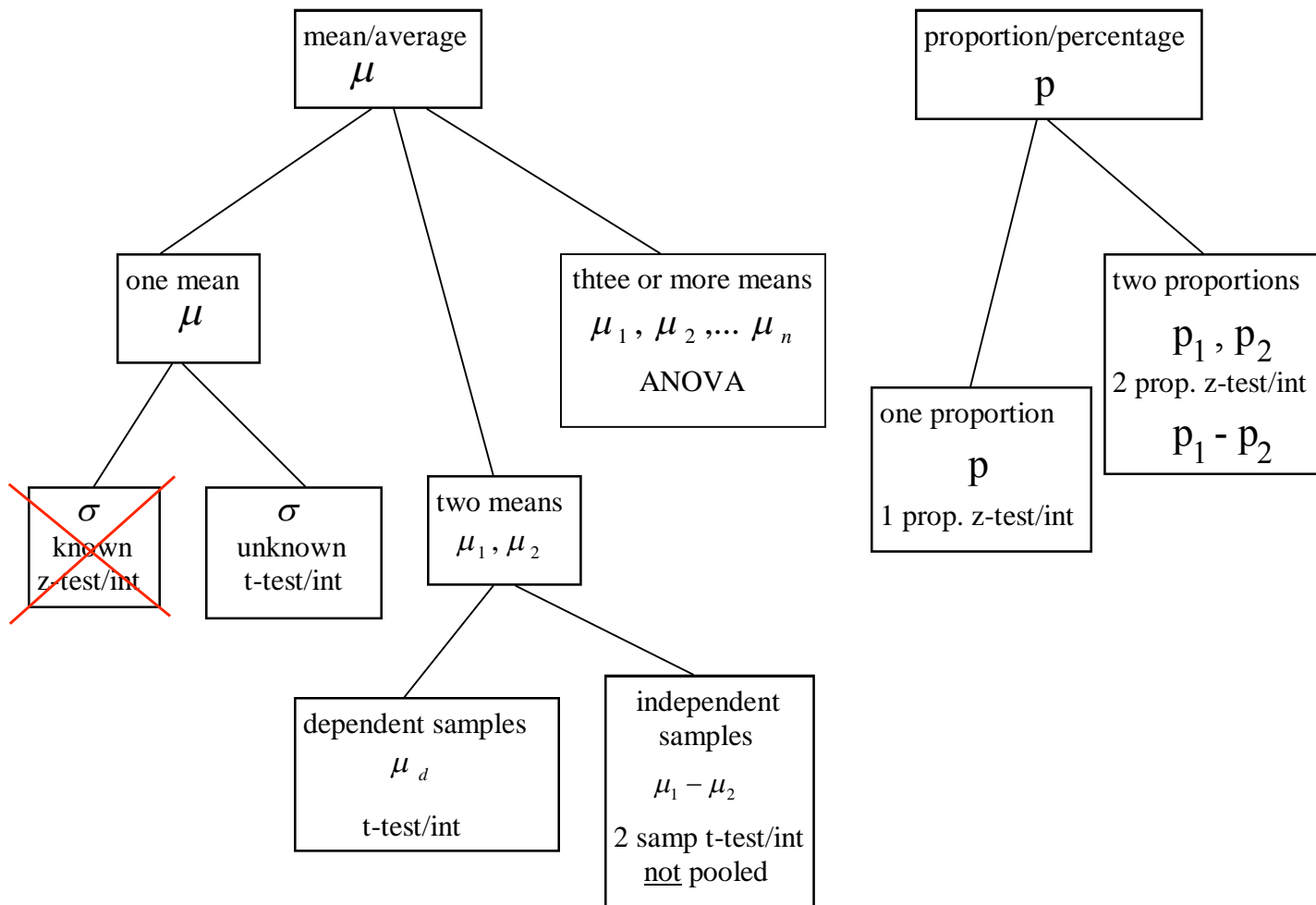
# Selecting Sample Size Formulas (ALWAYS ROUND UP!)

To estimate a proportion/percentage

To estimate a mean/average

$$n = \left( \frac{Z_{\alpha/2} \sigma}{E} \right)^2$$

With an estimate of p-hat

$$n = \hat{p}(1-\hat{p}) \left( \frac{Z_{\alpha/2}}{E} \right)^2$$

Without an estimate of p-hat

$$n = 0.25 \left( \frac{Z_{\alpha/2}}{E} \right)^2$$