P(falsely rejecting one H_0)

= P(making one type I error)

= α.

P(not making a type I error)

= $1 - \alpha$

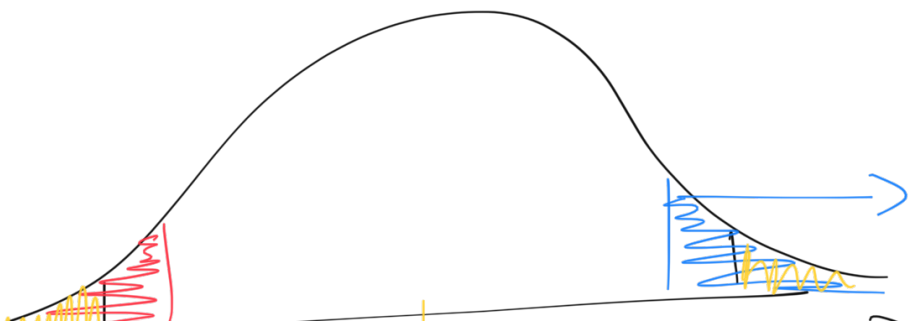
P(not making m type I errors)

= $(1-\alpha)^m$

P(falsely rejecting at (least) one)

= 1 − P(never making a type I error)

= $1 - (1-\alpha)^m$



$H_0 : \mu_1 = \mu_2 = \mu_3$

H_1: At least one $\mu_i \neq \mu_j$

for $i \neq j$.