hw\_07

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#"We calculated our target sample size using an estimated effect size, f, of 0.2, which would require a sample size of approximately 270 participants for the study to be powered at 90%."  
  
pwr.anova.test(k= 2, n= , f= .2, sig.level= .05, power= .9)

##   
## Balanced one-way analysis of variance power calculation   
##   
## k = 2  
## n = 132.3105  
## f = 0.2  
## sig.level = 0.05  
## power = 0.9  
##   
## NOTE: n is number in each group

#"We calculated our target sample size using an estimated effect size, f, of 0.1, which would require a sample size of 900 partici- pants for the study to be powered at 85%"  
  
  
pwr.anova.test(k= 2, n= , f= .1, sig.level= .05, power= .85)

##   
## Balanced one-way analysis of variance power calculation   
##   
## k = 2  
## n = 449.8818  
## f = 0.1  
## sig.level = 0.05  
## power = 0.85  
##   
## NOTE: n is number in each group

#"We calculated our target sample size using an estimated effect size, f, of 0.2, which would require a sample size of approximately 280 participants for the study to be powered at 85%"  
  
  
pwr.anova.test(k= 3, n= , f= .2, sig.level= .05, power= .85)

##   
## Balanced one-way analysis of variance power calculation   
##   
## k = 3  
## n = 92.03292  
## f = 0.2  
## sig.level = 0.05  
## power = 0.85  
##   
## NOTE: n is number in each group

#"We calculated our target sample size using an estimated effect size, f, of 0.15, which would require a sample size of approxi- mately 490 participants for the study to be powered at 85%."  
  
pwr.anova.test(k= 3, n= , f= .15, sig.level= .05, power= .85)

##   
## Balanced one-way analysis of variance power calculation   
##   
## k = 3  
## n = 162.8281  
## f = 0.15  
## sig.level = 0.05  
## power = 0.85  
##   
## NOTE: n is number in each group

#Chi Squared  
pwr.chisq.test(w = 0.1853198, N= , df= 2, sig.level = .05, power= .9)

##   
## Chi squared power calculation   
##   
## w = 0.1853198  
## N = 368.4529  
## df = 2  
## sig.level = 0.05  
## power = 0.9  
##   
## NOTE: N is the number of observations

#N = 369 observations  
  
  
P = matrix( c(.42, .28, .03, .07, .1, .1), byrow = TRUE, nrow =3)  
ES.w2(P)

## [1] 0.1853198

df = (3-1)\*(2-1)  
df

## [1] 2