|  |
| --- |
| recall directions for resampling |
|  |
| 1. access from start menu, if Add-Ins menu not currently on toolbar |
| 1. reset all variables. |
| 1. highlight data cells and click Shuffle (S) |
| enter input range and top left cell of output range  IMPORTANT: if you are shuffling multiple columns of unequal size, as for an ANOVA, you will want to click “xxx” and NOT check “Shuffle blank cells in data”. To understand why, try several different options. |
| 1. calculate the statistic of interest – WITH THE SHUFFLED VALUES -  it looks to me as if you do NOT need to redo this calculation if you have to rerun the RS – just highlight the statistic of interest (in 5 below) |
| 1. click on that cell (of if it takes many cells to do the calculation, the one you will want to compare to compute a p-value), and Repeat & Score (RS)  OR (only in certain cases) Resample with Replacement - bootstrap (RS) |
| enter how many random resamples you want, say 1000 |
| 1. go to results worksheet and scroll to bottom |
| 1. ask Excel to test if any of the random shufflings gave the statistic >= what the actual data gave |
| '=COUNTIF(range, ">= the statistic")' |
| how many times your shuffled differences were larger than the actual statistic |
| divide this result by number of shuffles (say, 1000) |
| 1. for fun, you might make a histogram of your shuffled values - this is your distribution!! |
| look on the distribution for the actual statistic…. |

Using Resampling Stats, determine the number of times (out of 1000) that the slope (*β1*) (determined randomly) would be larger than or equal to the *β1* we found from our original dataset. This time instead of shuffling your data, “Resample” them within columns – NOT a normal resample! You are running a bootstrap analysis!

RESAMPLING WITH REPLACEMENT, or bootstrapping, is just as above, EXCEPT that instead of clicking Shuffle (S), you click RS : resampling with replacement.