

| DESIGN                                       | EXAMPLE   | WHICH RESULT TO INCLUDE     |                                  |
|--|---|-----------------------------|----------------------------------|
|  |   | IN MAIN P-CURVE             | IN ROBUSTNESS TEST               |
| <b>3-CELL</b>                                | <i>Examining how math training affects math performance</i>   |                             |                                  |
| <b>High</b>                                  | 60 min of math training.  |                             |                                  |
| <b>Medium</b>                                | 30 min of math training.  | Linear trend                | High vs. low comparison          |
| <b>Low</b>                                   | 5 min of math training.   |                             |                                  |
| <b>Treatment</b>                             | 60 min of math training.  |                             |                                  |
| <b>Control 1</b>                             | 60 min of unrelated training.   | Treatment vs. Control 1     | Treatment vs. Control 2          |
| <b>Control 2</b>                             | No training.  |                             |                                  |
| <b>Treatment 1</b>                           | 60 min of math training, start with easy questions.   |                             |                                  |
| <b>Treatment 2</b>                           | 60 min of math training, start with hard questions.   | Treatment 1 vs. Control     | Treatment 2 vs. Control          |
| <b>Control</b>                               | No training.  |                             |                                  |
| <b>2X2 DESIGN</b>                            | <i>Examining how season interacts with being indoors vs. outdoors to affect sweating</i>  |                             |                                  |
| <b>Attenuated Interacton</b>                 | Always sweat more in summer, but less so when indoors.  | 2x2 Interaction             |                                  |
| <b>Reversing Interacton</b>                  | Sweat more in summer than winter when outdoors, but more in winter than in summer when indoors.   | Both simple effects         |                                  |
| <b>3x2 DESIGN</b>                            | <i>Examining how season interacts with math training to affect math performance</i>   |                             |                                  |
| <b>Attenuated Trends</b>                     | More math training (60 vs. 30 vs. 5 min) leads to better performance always, but more so in winter than in summer.  | Difference in linear trends | 2x2 interaction for high vs. low |
| <b>Reversing Trends</b>                      | More math training (60 vs. 30 vs. 5 min) leads to better performance in winter, but worse performance in summer.  | Both linear trends          | Both high vs. low comparisons    |
| <b>2x2x2 DESIGN</b>                          | <i>Examining how gender and season interact with being indoors vs. outdoors to affect sweating</i>  |                             |                                  |
| <b>Attenuation of attenuated interaction</b> | Both men and women sweat more in summer than winter, but less so when indoors. This attenuation is stronger for men than for women.   | Three-way interaction       |                                  |
| <b>Reversal of attenuated interaction</b>    | Men sweat more in summer than winter, but less so when indoors. Women also sweat more in summer than winter, but more so when indoors.  | Both two-way interactions   |                                  |
| <b>Reversal of reversing interaction</b>     | Men sweat more in summer than winter when outdoors, but more in winter than in summer when indoors.<br>Women sweat more in winter than summer when outdoors, but more in summer than winter when indoors. | All four simple effects     |                                  |