Analyzing your Panamath data

Performance on Panamath can be described by a single score, the Weber fraction (*w*), which indicates the level of "noisiness" in your underlying approximate number sense representations. No one can tell with perfect certainty exactly how many dots are flashed on a fast Panamath trial; everyone has some inaccuracy or "noise" in their estimates. The amount of noise varies from person to person and can change throughout your life (perhaps because of practice and learning). Noisier estimates make it harder for you to feel how many dots there are in the display and it is this noise that determines your accuracy. Noisier estimates are reflected in a larger Weber fraction (*w*) and less noisy estimates are reflected in a smaller Weber fraction (*w*).

If you are using the Powerpoint version of Panamath and students fill out an answer sheet:

1) Open the file "912_Input.xlsx" and enter the answers for each student in the gray column.
2) Once you entered all answers, you will get the scores for each student.

   "% Correct" reflects the percentage of correct answers for that particular student. We will not use these scores here, but they can give you an idea of whether a student was actually trying to do the task or not. If a student's score is close to chance (50%), he/she was probably not trying hard enough to solve the tasks.

   "Est *w*" is an estimate of their approximate number sense precision (i.e. the Weber fraction or *w*).

3) Copy and paste these scores into the "PutYourDataHere" page of the file labeled "GraphingResults.xlsx".
4) Enter each student's math scores. These scores can be percentages on a recent test, standardized math scores etc. as long as the scores are all from the same test.
5) You can then plot the relationship between students' math scores and their approximate number sense. You can find sample data and an example graph on the other pages of the "GraphingResults.xlsx" file. As you can see in our sample data, math scores increase with decreasing *w* (i.e. with greater ANS precision).

If you are using the online version of Panamath:

1) Ask students to download their results at the end and save them. Make sure you can identify which file belongs to which student as there is no identifying information in the results file.
2) Then follow steps 3-5 above.