

Math 2001: WHW 3

The following assignment will be graded with an emphasis on clarity of exposition. You should write in complete sentences, be as precise as possible, and be mathematically correct (both in content and format). Be sure to include a title, a short introduction to the topic, and to define all the relevant mathematical terms. The assignment should be **typed**, and emailed as a .pdf to me by the start of class on the day it is due.

Give the minimal number of steps to solve the *organizing tabs for the meticulous* problem for t tabs and 3 pegs. You should include (at the very least),

- (a) An introduction
- (b) A description of the problem (possibly some variations?).
- (c) A main result stated as a theorem.
- (d) A proof by induction of the theorem.
- (e) Precise arguments for all your assertions.

Note that there are really two things to prove: (1) a recursive formula relating the t th case to the $(t - 1)$ st case, and (2) a general formula. Only the second will be proved by induction.