

## 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 11am on the day it is due.

Give the minimal number of steps to solve the Tower of Hanoi problem for  $d$  discs and 3 pegs. You should include (at the very least),

- (a) An introduction
- (b) A description of the puzzle (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.