

Homework 12, REALLY Due Tue May 7, 2013

(I REALLY Want it on May 7 so I can go over it that day.)

COURSE WEBSITE: <http://www.cs.umd.edu/gasarch/858/S13.html>

(The symbol before gasarch is a tilde.)

1. (0 points) What is your name? Write it clearly. Staple your HW. When is the FINAL (give Date and Time)? If you cannot make it in that day/time see me ASAP. Join the Piazza group for the course. The codename is cmsc858.
2. (50 points) Show that $W(k, c) \leq W(W(k, c - 1), 2)$. Why does this NOT suffice to prove VDW's theorem.
3. (50 points) Prove the following rigorously (that is, make formal what I did with examples): If (a_1, \dots, a_n) is a tuple of n integers such that NO subset sums to 0 then there is a number c and a coloring $COL : \mathbf{N} \rightarrow [c]$ such that there is NO mono solution to $\sum_{i=1}^n a_i x_i = 0$.