MTE 405  Special Topics       2 credits    Fall, 2008

The course: Our “topic” this semester is “Middle School Contest Math”. What this means
is that the course will revolve around solving mathematics problems, using items from the
MATHCOUNTS and AMC 8 competitions for middle school students as the vehicle. As we
solve problems from these contests, we will be reviewing a lot of mathematics that you already
know and learning a lot of new things as well. We will meet Tuesdays from 5:30 to 7:17 p.m.,
with a short break half-way through. The CRN is 40801, and the classroom is 268 SFH.

Instructor: Professor Jerrold W. Grossman, 346 SEB, (248) 370-3443. My preferred e-mail
address is grossman@oakland.edu. Rather than listing set office hours, my policy is that I’m
almost always around and you are encouraged to come for help or just to chat whenever you
wish. You can also make an appointment, of course.

Website for the course: I have put some material that might be of interest on a course
Web page (personalwebs.oakland.edu/~grossman/MTE405); please have a look at it. There
is a forum posting on Moodle that also gives this address.

Prerequisites: The prerequisite for this course is formally MTE 211, although I will also
assume that you know high school level mathematics through precalculus (MTH 141). The
attitudinal prerequisite is to be excited about mathematics and solving math problems and
have a desire to expand your mathematical knowledge.

Textbook: We have been given free materials from MATHCOUNTS. In particular, I will
provide everyone with a copy of the 2007–2008 MATHCOUNTS School Handbook, as well as
some other materials. You can download a more recent version of this handbook from the
MATHCOUNTS website, as well, if you wish (www.mathcounts.org). The AMC 8 website
is www.unl.edu/amc/e-exams/e4-amc08/amc8.shtml. You might also want to see the Art of
Problem Solving website (www.artofproblemsolving.com).

Calculator: You should have a calculator, preferably a graphing calculator, for this course.
Familiarize yourself with its operation.

Homework: You will be expected to read assigned sections of the MATHCOUNTS Handbook
between classes and work on the problems (individually or in small groups). Students will
be called on to present solutions to problems in class, and then we will discuss the solutions.
You will be asked to turn in some written assignments as well, which again can be completed
individually or in small groups (no more than three per group, please).

Tests: We will have several fairly short tests during the semester, consisting of solving contest-
type problems, and perhaps also asking for responses about the problem-solving process. I have
not yet decided on the details. A final examination on Tuesday, December 9, 7:00–10:00 pm will
be more of the same. Tests will be closed book, with calculators permitted.

Grades: The various written assignments will count 20% of your course grade, the totality
of the in-class tests 40%, the final exam 20%, and class participation 20% (missing more than
one class for whatever reason will impact negatively on the last of these). Make sure to focus
on clear and effective communication in all your written and oral work in this class.