MathHW.net

Welcome to Discrete Mathematics!

Contact Information
Teacher Contact:
Mr. Jim Brennan
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MISSION STATEMENT & EXPECTATIONS FOR LEARNING
Through Education for LIFE students will
Learn to be creative and critical thinkers
Inquire, investigate, and innovate
Flourish in self-directed and collaborate environments; appreciate diversity, and promote respect
Effectively adapt technology; use, manage, and evaluate information and communicate effectively

Course Description
How does the apportionment of seats in congress happen? What does 'fair' really mean? What is the most meaningful way to organize and manage a large collection of data? How do you optimally color a map, schedule appointments, travel the shortest distance between locations, spread the gossip? What are the odds of winning the jackpot, the card game, the roulette wheel? This course will provide a sound introduction to social choice, to matrices and their uses, to graph theory and its applications, to recursion and iteration, and to combinitorics. The course relies heavily on the graphing calculator and the computer lab.

Textbook and Textbook resources
Textbook: Material from a variety of sources will be used. Many resources will be provided by the teacher; a three-ring binder is strongly recommended.
Class Web Site: www.MathHW.net .

Content
1. Understanding the problem solving process
2. Map coloring and conflict resolution
3. Drawing graphs with one line
4. Hamilton circuits (and the traveling salesmen problem)
5. Spanning trees
6. Shortest Route
7. Systematic listing and counting
8. Number patterns and iteration

Grading

The grading for each quarter will represent the students' achievements, efforts, and contributions measured by classroom productivity, homework, projects, quizzes and tests. The grade for each the third quarter will account for 45% of the semester grade, the grade for the fourth quarter will account for 35% of the semester grade, and the semester exam will account for 20% of the final grade. Weekly class participation grades will account for 25% of the quarter grade. Specific class assignments with account for 25% of the quarter grade. Homework and projects will account for 20% of the quarter grade, quizzes/tests or other assessments will account for 30% of the quarter grade.

Expectations

Students are expected to put forth their best efforts and are responsible for creating and maintaining an environment where all students can succeed, following the published policies in the Student Handbook and the posted classroom rules. This class demands a high level of class participation.

Materials

Students should bring to class each day a three-ring binder, writing utensils, and it is **strongly** recommended that each student purchase a *TI-84 Silver Edition Graphing Calculator*. Students may find it beneficial to have a compass, protractor, ruler, graph paper and colored pencils/markers on hand for completing homework assignments and projects throughout the course or to complement the classroom supplies.

Feedback

Questions, comments and feedback are always welcome. For any concerns about student progress or course material please contact the classroom teacher first, and the department curriculum leader as needed to address any issues.