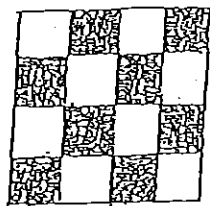


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### Course Introduction

Recreational mathematics (puzzles, combinatorial games, etc) is a "fringe" area of mathematics. It has problems in common with algebra, geometry, graph theory, number theory, probability, and combinatorics. Requiring little background preparation, it provides many challenging problems with clever, even elegant, solutions. For centuries people have been fascinated by the lure of these stimulating problems.

### Course Goals

Your problem solving skills will be greatly enhanced. You will be able to tackle challenging problems. Your critical thinking will be strengthened as you evaluate possible solutions. You will be able to write up solutions concisely. You will experience the "aha" of insight, the joy of discovery, the thrill of finding an elegant solution, as well as the satisfaction of understanding.

### Class Meetings

A great variety of interesting problems will be selected from many sources. In a typical class we will first discuss your work on previously assigned problems. Then a new set of four problems will be distributed and you will work on them individually or in groups of two or three. You should have an attitude of cooperation, not competition, with your classmates. The instructor will clarify the wording of problems, provide hints and background material and only as a last resort give complete explanations of solutions. You are expected to work hard in class on the problems, help each other solve them, and occasionally present a solution. For homework you should try to solve the problems from the previous class. Written solutions will be periodically requested. You must write up your solutions individually.

### Grading

Classwork:	10	(includes attendance)
Problem Solutions:	40	
Two Tests:	15	each
Final Exam	20	

### Suggestions for Problem Solving

1. Read the problem carefully and make sure you really understand it.
2. Take a pencil and paper and mess around. Don't be afraid to try any idea - it might work! Try a special case, a small case, or a similar problem.
3. If no ideas are coming, set the problem aside and return to it later. Think about it in the shower, in bed, etc. Explain it to your friends - they may have an idea.
4. Try not to become too discouraged or frustrated. You will find that the tougher problems give you the greatest satisfaction when you solve them.