Palomar College  
Mathematics Department  

Math 100  
Exploring Mathematics  
Class #: 30200  
Room E-6  
Tuesday & Thursday 9:30 p.m. – 10:50 p.m.  
Spring 2007

Professor: Fari Towfiq  
Phone: 744-1150, Ext. 2716  
E-mail: ftowfiq@palomar.edu or fariheh@mailhost2.csusm.edu  
Office: E11-M  

Office Hours:  
Monday 9:30 a.m. – 10:00 a.m.  
3:30 p.m. – 4:00 p.m.  
Tuesday 11:00 a.m. – 12:00 noon  
Wednesday 10:00 a.m. – 11:00 a.m.  
Thursday 9:00 a.m. – 9:30 a.m.  
11:00 a.m. – 12:00 noon  
Friday 10:30 a.m. – 11:00 a.m.  

Math Center:  
Monday 10:00 a.m. – 11:00 a.m.  
4:00 p.m. – 5:00 p.m.  
Tuesday 2:00 p.m. – 5:00 p.m.

Prerequisite: A minimum grade of “C” in Math 56 or math 60 or a passing score on the appropriate Placement Test

Textbook: Mathematical Ideas, 10th Ed.  
By Miller, Heeren, Hornsby

Note: The textbook is mandatory for the course. Two copies of the textbook are available for students’ use at the Math Center. If for some compelling reason you cannot buy the book right away, you should use the textbook at the Math Center. Otherwise you will fall behind in the class.
Course Description:
Selected topics from Logic, Modern Algebra, Number Theory, Set Theory, Numeration and Mathematical System, Counting Method, and Probability. Designed to give the student an introduction to the structure of mathematics and its applications. Recommended for liberal arts students.

Resources:

1) Tutoring is available through the Mathematics Center (Room E2) and the Tutorial Center (the first floor of Library).

2) Student’s Solution Manual and Textbook are available for student use at the Mathematics Center.

Expectations:

- Attend class on regular bases.
- Participate in class discussion and activities.
- Take notes during class.
- Ask questions in class.
- Spend at least 2 hours outside of class in preparation for each hour in class.
- Read the textbook.
- Complete all homework assignments.
- Make sure you understand how to solve homework problems.
- Seek for help in a timely manner.
- Take all exams.

Classroom Conduct:

Class time is valuable. Disruptive behavior such as talking, arriving late, leaving early, working on unrelated material, showing negative attitudes or facial expressions is not acceptable. Also, at all the times a student’s conduct and language is expected to be respectful to other students’ and the professor. If a student participate in any of these activities the student may be suspended or expelled from the class for the day or the semester.

Grading Procedures:

The course grade will be based on the following.

<table>
<thead>
<tr>
<th>Test</th>
<th>Chapters</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Test 1</td>
<td>Chapters 1, 2</td>
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<td>Test 2</td>
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<td>Test 3</td>
<td>Chapters 5, 11</td>
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<td>Test 4</td>
<td>Chapter 12</td>
<td>16%</td>
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<tr>
<td>Assignments</td>
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<td>11%</td>
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<tr>
<td>Final</td>
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<td>25%</td>
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<td>Total</td>
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Due dates will be announced in class.
**Calculator:** You need to have a scientific calculator or graphing calculator (TI83, TI84, or equivalent).

**Make-up Test Policy:**
Make-up test is given on emergency bases.
If for some compelling reason you cannot take a test on the test day, you need to make an arrangement with me in advance.
If you do not take a test, you will receive a grade of “0” zero for that test.
*Note:* Your lowest test score will not be dropped.

**Academic Integrity:**
If a student is found cheating on an exam, he/she will receive a grade of “F” for that exam. If the student cheats for a second time, he/she will be dropped from the course and will receive a grade of “F” for the course.

**Cell Phones / pagers:**
Please turn off all cell phones and pagers before coming into class.

**Drop Policy:** Students may be dropped for excessive absences or failure to take examinations.

**Drop Dates:**
- January 16 – February 14 without “W”
- February 15 – March 10 with “W”

**Credit/No Credit:**
Deadline to choose CR/NC is February 15.

**Final Exam:**
Tuesday, May 15 from 8:00 a.m. to 9:50 a.m.
The final examination is comprehensive. Also, it is mandatory for all students in this class.
# Assignments

## The Art of Problem Solving

Chapter 1, pages 2-39

Assignments:

<table>
<thead>
<tr>
<th>Section</th>
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<tbody>
<tr>
<td>Sec 1.1</td>
<td>1, 3, 5, 15, 17, 21, 27, 31, 33, 35, 37, 41, 43, 45, 49, 57, 58</td>
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<tr>
<td>Sec 1.2</td>
<td>1, 3, 5, 11, 13, 15, 17, 21, 23, 25, 27, 29, 35, 43, 45, 47</td>
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<tr>
<td>Sec 1.3</td>
<td>7, 8, 12, 13, 16, 19, 20, 22, 23, 25, 29, 35, 40, 59, 63, 65, 67, 69</td>
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<tr>
<td>Sec 1.4</td>
<td>1, 5, 7, 9, 17, 19, 23, 25, 27, 29, 30, 35, 37, 47</td>
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## The Basic Concepts of Set Theory

Chapter 2, pages 50-90

Assignments:

<table>
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<td>Sec 2.5</td>
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## Introduction to Logic

Chapter 3, pages 95-148

Assignments:

<table>
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<td>Sec 3.6</td>
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## Numeration and Mathematical System

Chapter 4, pages 152-192

Assignments:

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---Test 1---

---Test 2---
Number Theory
Chapter 5, pages 195 – 243
Assignments:

Sec 5.1  1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 31, 33, 37, 41, 47, 51, 55, 57, 71, 81
Sec 5.2  1, 3, 5, 11, 17, 19, 21, 27, 29, 33, 35
Sec 5.3  1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 31, 33, 35, 37, 39, 41
Sec 5.4  1, 3, 9, 10, 11, 12, 13, 29, 30, 31, 33, 35, 37, 42, 46, 48, 49, 53, 54
Sec 5.5  1, 3, 7, 9, 10, 11, 15, 21, 31

Counting Method
Chapter 11, pages 629-670
Assignments:

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Sec 11.2  5, 7, 9, 11, 13, 15, 19, 21, 31, 33, 35, 43, 45, 47, 53
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Sec 11.5  3, 5, 7, 15, 17, 22, 23, 25, 27, 29, 31, 33, 35, 37

Probability
Chapter 12, pages 674-716
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Sec 12.3  1, 2, 7, 9, 11, 13, 15, 17, 19, 23, 25, 29, 31, 45, 47, 51
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Sec 12.5  3, 4, 5, 9, 11, 17, 19, 24