

SYLLABUS
MATH 301A-01 / Call NO. 80280
Fundamental Concepts of Arithmetic and Geometry for Educators
Fall/2009

Instructor Information:

Instructor: Lamies Nazzal

Office: JB-532

Office Hours: MWF: 9:10 – 10:30 a.m.,
or by appointment.

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Letter to student:

Welcome to a new quarter! I am so pleased to have you in my class. Your attendance and participation is a vital part of this course. It is necessary for you to be present and punctual at each class meeting.

I expect you to do your best in this class by asking questions in class and doing your homework regularly. Keep in mind, we will be covering a lot of material in ten weeks. Try not to fall behind! Even though the homework is collected only once a week, try to do the problems as soon as possible after we cover the material in class.

You are encouraged and welcomed to talk to me about the homework and any question you may have about the material. Come and see me in my office for extra help if you need it.

I am looking forward to working with each and every one of you!!!

Time and Place:

MWF 8:00 – 9:10 a.m. in TC- 013

Textbook:

The required text for this course is:

Mathematics for Teachers, an Exploratory Approach to Arithmetic, Algebra, and Geometry, by Robert G. Stein with Laura Wallace, Second Edition.

Supplies:

Three-ring binder (for text), note paper, graph paper, ruler, scissors, and colored pencils.
Optional: your own set of cuisenaire rods, algebra tiles and base-10 blocks.

Course Description:

- Prerequisites for this course are the completion of Math 115 (or other general education mathematics requirement if under bulletin prior to 2003/2004) and the general education requirements in written communication, oral communication, and critical thinking are required.
- We will be discussing the mathematical reasoning behind the structure and arithmetic of real numbers and the connections between numbers and geometry. (Sections: 1.1 – 1.4, 2.1 – 2.3, 3.1 – 3.2, 4.1 – 4.3, 5.1 – 5.2, 6.1 – 6.5, 7.1 – 7.6 & 8.1 – 8.2). See the accompanying course outline.
- The goals for the course are:
 - to review and master the basic skills in arithmetic and geometry,
 - to develop higher order thinking skills,
 - to discover and discuss why basic algorithms work,
 - to explain mathematics both orally and in writing,
 - to consider ways of teaching the material.

These goals are consistent with the goals for students in grades K-12 as outlined in *Mathematics Framework for California Public Schools* adopted by the California State Board of Education, March 2005 and also with the recommendations for the preparation of teachers of mathematics by the Mathematical Association of America. Included in these recommendations is the following statement: A teacher of mathematics must “possess knowledge and have an understanding of mathematics that is considerably deeper than that required for the school mathematics they will teach.” Please visit www.cde.ca.gov/ci/ma/cf and www.maa.org for more information.

Evaluation:

Each student will be evaluated in four areas, homework, explorations, chapter tests and the final.

1. ***Homework:*** Each day there is assigned work that correlates with the chapter we are working on in class. These assignments will be collected each Friday and will NOT be accepted late. Instead, your lowest homework score will be dropped. **Answers must be done clearly and neatly. Also, your pages need to be stapled. When you are writing your homework problems pretend that one of your future students will be reading it. Therefore, show all your steps in detail and be precise!** I will spend time going over any questions you may have on these assignments if time permits.

2. *Explorations (mini-project)*: In addition to the regular homework problems, you will be required to complete one math exploration from the book. These investigations will be opportunities for independent investigations of supplemental or enrichment topics. We will not necessarily cover these topics in class. In the explorations, the questions must be answered thoroughly, clearly, and correctly. For instance, if you are asked to find a pattern, you should describe the pattern in words and illustrate the pattern by showing examples. Show a minimum of 3 examples when you are asked to do a particular task or find a pattern. Please do the explorations on one side of paper and use a cover page to identify yourself. The explorations will be due Wednesday, Dec, 4th.
No late projects will be accepted!
3. *Tests*: There will be two tests tentatively scheduled for Wednesday, October 21st and Wednesday, December 2nd. There are **NO** make-up tests (unless if you have a written verifiable excuse).
4. *Final Exam*: The final exam will be a 2-hours cumulative exam. It will be held Friday, Dec. 11th from 8:00 to 9:50 a.m.

Grade Breakdown:

Homework Assignments	15 %
Explorations (Mini-Project)	5 %
Test 1	25 %
Test 2	25 %
Final	30 %

Course Requirements & Grading scale:

To pass this course, you must demonstrate competency in basic skills, achieve a score of 65% or better on the final exam, and have an overall average of 70% or better on homework, explorations, tests, and the final. Then, letter grades will be assigned according to your overall course percentage as follows:

A:	92 – 100 %
A-:	89 – 91 %
B+:	87 – 88 %
B:	82 – 86 %
B-:	79 – 81 %
C+:	77 – 78 %
C:	70 – 76 %
NC:	Below 70 %

Important Dates:

- * Last day to add classes via *My Coyote Self Service* is Sept. 30th.
- * Last day to drop classes via *My Coyote Self Service* is Oct. 14th; **if you wish to drop the course it is your responsibility to formally withdraw from class via *My Coyote Self Service* prior to the drop date.**
- * Last day of classes is Dec. 7th.
- * Grades available via *My Coyote Self Service* Dec. 21st.
- * Tentative Furlough Days: Nov. 30th, and Dec. 7th.

Policies:

- In accordance with university rules, students may be required to show a picture I.D. at any time during the quarter.
- The student is responsible for all material covered and for all announcements made in class.
- Although you may work together with classmates, you should write up your answers independently. Cases of plagiarism may be referred to the Office of Judicial Affairs for disciplinary action. See the Academic Regulations section of the course catalog <<http://catalog.csusb.edu/>> and look up Plagiarism and Cheating.
- If you are in need of an accommodation for a disability in order to participate in this class, please contact Services to Students with Disabilities at UH-183, (909)537-5238.
- All electronic equipments—cell phones, pagers, headphones, and mp3 players—should be turned off during lectures and tests.
- No food is allowed in the classroom.
- No calculators on tests or final exam!



Tentative Schedule

Please note the order in which the chapters are presented for this course!

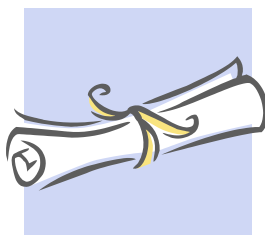
<i>Date</i>	<i>Chp/sec</i>	<i>Exercise Set</i>
Friday, Sept. 25	1.1	p. 8 # 1, 5
Monday, Sept. 28	1.2	p. 14 # 2, 3, 4
Wednesday, Sept. 30	1.3	p. 20 # 2, 7
Friday, Oct. 2	1.4	p. 28 # 2, 3, 7, 9, 11
Monday, Oct. 5	2.1	p. 34 # 2
	2.2	p. 39 # 1, 3, 4, 15
Wednesday, Oct. 7	2.3	p. 47 # 1, 2, 4, 6
Friday, Oct. 9	3.1	p. 52 # 1, 3, 4, 5, 6, 8
	3.2	p. 59 # 2, 5, 6, 7
Monday, Oct. 12	4.1	p. 70 # 4, 5, 6
	4.2	p. 85 # 4, 8, 10, 11, 14
Wednesday, Oct. 14	4.3	p. 92 # 2, 3, 4, 8, 9
Friday, Oct. 16	5.1	p. 101 # 2, 4, 9
	5.2	p. 112 # 7, 8, 9, 10
Monday, Oct. 19	Review	
Wednesday, Oct. 21	Test 1 (Chapters 1-5)	
Friday, Oct. 23	6.1	p. 139 # 2, 3, 11, 13, 14
Monday, Oct. 26	6.2	p. 145 # 2, 3
Wednesday, Oct. 28	6.3	p. 151 # 1, 2, 3, 4, 5 (a – g)
Friday, Oct. 30	6.4	p. 160 # 2, 3, 4
Monday, Nov. 2	6.5	p. 166 # 1, 2
Wednesday, Nov. 4	7.1	p. 173 # 4, 5, 8, 11, 12
Friday, Nov. 6	7.2	p. 180 # 1, 2, 3, 4
Monday, Nov. 9	7.3	p. 186 # 3, 4, 5
Wednesday, Nov. 11	Holiday	
Friday, Nov. 13	7.4	p. 193 # 3, 4, 5, 6, 8, 9

Monday, Nov. 16	7.5	p. 199 # 1 – 5
Wednesday, Nov. 18	7.6	p. 205 # 3, 5, 6
Friday, Nov. 20	8.1	p. 216 # 2, 4, 6, 7, 8, 11
Monday, Nov. 23	8.2	p. 221 # 1, 2, 3, 4, 9
Wednesday, Nov. 25	Review	
Friday, Nov. 27	Holiday	Happy Thanksgiving!!!
Monday, Nov. 30	No Class	<i>Tentative Furlough Day</i>
Wednesday, Dec. 2	Test 2 (Chapters 6-8)	
Friday, Dec. 4	Final Review	Exploration Due.
Monday, Dec. 7	No Class	<i>Tentative Furlough Day</i>
Friday, Dec. 11 8:00 – 9:50 a.m.	Final Exam	

Explorations

Choose one of the following explorations for your project!

Exploration #1	Section 3.2 (p. 61-63) – Exercises: 8 – 11
Exploration #2	Section 4.1 (p. 74-75) – Exercises: 9 – 13
Exploration #3	Section 5.1 (p. 105-107) – Exercises: 19 – 23
Exploration #4	Section 5.1 (p. 107-108) – Exercises: 24 – 27



The instructor reserves the right to make changes to the syllabus