

MATH3 (814013) SPRING 2007

Instructor's Name: Mahmoud Syam	Group Number: F09 Room: 305
Office: Foundation Building (AD 325)	Class Schedule: sun & Thu (4:00 - 6:00)
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Text Book: College Algebra with Trigonometry, 7th Edition, Barnett, McGraw Hill
http://www.mhhe.com/math/precalf/barnettcat7/student_index.mhtml

Assessment Methods:

- 8% Quizzes
- 12% Mini Exams
- 30% Midterm Exam - Saturday April 28th, 2007 -Time will be announced later
- 50% Final Exam (comprehensive) - Tuesday June 19th, 2007- Time will be announced later.

Quizzes

Quiz1	Quiz2	Quiz3	Quiz4
Week 2	Week 5	Week 9	Week 12

Please be notified that all quizzes will be counted and there will be **NO** make up quizzes for absent students for any reason.

Mini Exams

ME1	ME 2	ME 3	ME 4
Week 3	Week 6	Week 10	Week 13

Please be notified that all Mini Exams will be counted. It is **your responsibility to schedule** your mini-exam. Please refer to the separate mini-exams notice for more details.

Course Description:

This course is the first half of preparatory course for students who wish to register for a Calculus course. The course will start with a quick review of the essential of real numbers and basic operations on polynomials, then move on to rational expressions—including basic operations and rational exponents. Then we will solve linear and quadratic equations and inequalities. Finally, we finish with a quick study on polynomials division and tools to find their zeros.

Course Objectives:

Math 3 (814013) offers to students the opportunity to gain deeper understanding of algebraic relationships and processes as well as new and improved algebraic skills. Students who successfully complete the course will have the algebraic skills necessary for further study of mathematics and for applications of algebraic techniques in other fields. In addition, the course promotes to students independent and collaborative learning.

Regulations:

- ❖ Attendance is a very important factor in your performance and will be taken every class meeting. Please note the following:
 - ❖ First day of classes is **March 11th, 2007**.
 - ❖ Last day of classes is **June 14th, 2007**.
 - ❖ University regulations state that student's absence must not exceed 25% (7 lectures) - This includes absence for sickness, medical appointments ... etc.
 - ❖ You will be warned by your QU-email when your absence rate gets close to 20% and you will get your final warning when your absence rate is more than 25%.
 - ❖ A student whose absence rate exceeds 25% (more than 7 lectures, will be barred (not allowed to take) any coming exams and if such a student showed for any exam, his/her exam will not be graded.
- » The University of Qatar implements the following grading system:

A	B+	B	C+	C	D+	D	F
90 - 100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	0 - 59

- » F barred (FB) "راسب محروم" is given to a student whose absence rate has exceeded 25%.
- » F absent (FA) "راسب غياب" is given to a student whose absence rate is below 25%, fulfilled all course requirements but missed the final exam.
- » Incomplete (I) "غير مكتمل" is given to a student whose absent rate is below 25%, fulfilled all course requirements, have not taken the final exam but presented an acceptable documented excuse in good time before handling final results.

Course syllabus

Unit 1: Real Numbers

Book section	Title	Pages
1.1	Algebra and Real Numbers	2-10
1.2	Polynomials: Basic operations	12-20

Book-assigned Unit 1 homework:

Section	Page	Exercises
1.1	10-11	1-8, 27, 29-33, 43-45, 49, 53, 55, 57, 59
1.2	21-22	1, 3, 5, 7, 9, 11, 16, 19, 28, 29, 31, 37, 41, 43, 46, 49, 51, 54, 57-64

Unit 2: Basic algebraic Operations

Book section	Title	Pages
1.3	Polynomials: Factoring.....	23-31
1.4	Rational expressions: basic operations and simplifying	33-40
1.5	Integer Exponents	42-47
1.6	Rational exponents	51-55
1.7	Radicals	57-64

Book-assigned Unit 2 homework:

Section	Page	Exercises
1.3	31-32	1, 3, 5, 7, 10, 13, 15, 17, 20, 21, 23, 25, 26, 28, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51-56, 57, 59, 60-65, 69, 71
1.4	40-42	1, 3, 4, 6, 8, 10, 11, 13, 15, 17-20, 21, 23, 25, 27, 28, 30, 31, 33, 34, 37-43, 45, 47, 48, 51, 53-58
1.5	49-50	1-14, 29-54, 65-70
1.6	56-57	1, 4, 7, 9, 11, 13, 16, 18, 19, 22, 23, 25, 29, 30, 32, 34, 36-38, 47-50, 52, 55-57, 59, 61-64, 67
1.7	65-66	1, 3, 6, 8, 9, 13, 15, 16, 17, 20, 22, 26, 29, 31, 33, 35, 37, 39, 43, 45, 47, 49, 51, 53, 55, 58, 61, 63, 65-68, 81-84, 87-94
Chapter 1	70-72	15, 17, 18, 28, 29, 39, 41, 45, 53-59, 83, 84, 85, 92-98
Review exercise		

Unit 3: Linear and Quadratic Equations and Inequalities

Book section	Title	Page
2.1	Linear equations and applications	75 - 80
2.3	Linear Inequalities.....	102-106
2.4	Absolute value in Equations and Inequalities.....	109-117
2.6	Quadratic equations and applications:	130-139
2.7	Equations reducible to quadratic:.....	145-151
2.8	Polynomial and Rational inequalities	153-155 & 158-160

Book-assigned Unit 3 homework:

Section	Page	Exercises
2.1	86-87	3, 5, 7, 11, 13, 15, 17-19, 23, 30, 31, 35, 37-39, 41, 42, 44-52, 75
2.3	106-107	1-17, 19, 21, 25, 27, 29, 43, 45, 47, 53, 59-65, 71-72
2.4	117-118	1, 3, 5, 7, 19, 23, 25, 27, 29, 33, 35, 37, 39, 41, 43, 45, 47, 51, 57, 59, 61, 65, 66, 67, 69, 71, 73, 75, 77, 78, 79, 80, 83, 84, 85, 86, 87
	166-167	22, 27, 49, 55
2.6	142-143	1, 3, 7, 11, 15, 17, 20, 22, 24, 27, 31, 33, 37, 39, 41, 59, 61, 62, 68, 71, 72, 75-84
2.7	151-152	1, 3, 6, 7, 11, 13, 15, 19, 21, 23, 27, 29, 31, 33, 35, 37, 41-44, 47, 48
2.8	160-161	1, 3, 7, 9, 13, 21, 23, 26-30, 39, 41, 43, 45, 48-50
	165-167	7, 44, 53-55, 58
	309	57-60, 71-74
Review Exercise	168-170	1, 14, 15, 18, 19, 23, 26-29, 45, 46, 55-58, 60, 64, 72, 75,
Ch. 1 & 2		77, 81, 83, 84, 85

Unit 4: Polynomial and Rational Functions

Book section	Title	Pages
4.1	Polynomial Functions and Graphs	285-291
4.2	Finding Rational Zeros of Polynomials.....	297-299

Book-assigned Unit 4 homework:

Section	Page	Exercises
4.1	295-297	1-9, 12, 13, 15, 57, 59, 60, 75
4.2	308-309	1, 3, 5, 7, 11-16, 17-20, 27, 49-54
Review exercise	349-351	1, 2, 3, 5, 14-17
Ch. 4		