



Prince Sultan University

Department of Mathematical Science

SYLLABUS

MATH 001 (112)

Mathematics Department Website: www.psu.edu.sa/math

Course : MATH 001
 Title : Orientation Mathematics I
 Textbook : **Algebra and Trigonometry, Fourth Edition; Robert Blitzer; Prentice Hall, 2004.**
 Objectives : The students are expected: to comprehend the material of this course, to improve their computational skills in basic Algebra, and to demonstrate their writing ability in Mathematics with logical steps.

The medium of instruction will be strictly ENGLISH from the first day of classes.

Week #	Date	Section	Topic
1	Jan 28 – Feb 01	P.1 P.2	Introduction Algebraic Expressions and Real Numbers Exponents
2	Feb 04 – 08	P.3 P.4	Radicals and Rational Exponents Polynomials
3	Feb 11 – 15	P.5	Factoring Polynomials
4	Feb 18 – Feb 22	P.6 1.1	Rational Expressions Graphs
5	Feb 25 – 29	1.1 1.2	Graphs Linear Equations and Rational Equations
6	Mar 03 – 07	1.4 1.5	Complex Numbers Quadratic Equations
7	Mar 10 – 14	1.5 1.6	Quadratic Equations Other Types of Equations
8	Mar 17 – 21	1.7 2.1	Linear Inequalities and Absolute Value Inequalities Basics of Functions and Their Graphs
	Mar 24 – 28	Midterm Vacation	
9	Mar 31 – Apr 04	2.2 2.3	More on Functions and Their Graphs Linear Functions and Slope
10	Apr 07 – 11	2.4 2.5	More on Slope Transformations of Functions
11	Apr 14 – 18	2.6 2.7	Combinations of Functions; Composite Functions Inverse Functions
12	Apr 21 – 25	2.7 2.8	Inverse Functions Distance and Midpoint Formulas; Circles
13	Apr 28 – May 02	2.8 3.1	Distance and Midpoint Formulas; Circles Quadratic Functions
14	May 05 – 09	3.2 3.3	Polynomial Functions and Their Graphs Dividing Polyn.; Remainder & Factor Theorems
15	May 12 – 16	3.3 3.4 3.6	Dividing Polyn.; Remainder & Factor Theorems Zeros of Polynomials Polynomial and Rational Inequalities
16	May 17 – 29		Final Exams

Omitted Objectives (Topics)

Section	Objectives	Section	Objectives	Section	Objectives
P.2	9	1.6	6	3.1	4
1.1	3, 5	2.1	7	3.4	1,2,3 & 5
1.2	5	2.3	7	3.6	3
1.5	7	2.6	5		

Class attendance:

- Students are required to attend all classes starting from the first day of the semester. Attendance will be taken at the start of the lecture. If the student enters the classroom after the attendance was taken and within **5 minutes**, he will be marked **late**. 3 lates will be counted as one absence. If the student enters the classroom **after 5 minutes**, he will be marked **absent**.
- **No excuses for missing classes, including medical reasons, are accepted.** Any excuse, legitimate or not, will be counted against the student's limit for DN (16 Absences).
- “**DN Grade**” will be issued to a student who **misses 16 classes**. This means he cannot enter any more classes or exams. (**1st warning: 6 absences** ; **2nd warning: 11 absences**)
- In case a student **misses** a class, he must contact any one of his classmates to get all information and topics covered of classes he **missed**.
- 5 points will be assigned to the attendance. **One point will be deducted** from the student's total grade for every one absence he has after missing four (4) classes.

Class work(Quizzes, Online Homework and Class Participation)

- The class work grade is expected to reflect the performance of the student throughout the semester and is based on 10 quizzes, online homework, class participation, and attendance.
- Quizzes will be given at the beginning of some lessons. The quiz covers the materials discussed during the previous lectures and will be picked from the list of suggested HOMEWORK PROBLEMS you are given along with the syllabus. 7-10 quizzes will be given during the term. The best 7 quizzes will be counted. (Remember that if you are absent or late for the lesson, then you will get a zero for the quiz.) (There is no make up for the quizzes.)
- You need to do the HOMEWORK PROBLEMS that are given to you along with the SYLLABUS for practice (Quizzes and exams are either picked from these problems or from problems very similar to them.)
- You will be given Online Homework on weekly basis (or as told by your instructor) using Coursecompass which is a very helpful tool that should improve your performance in the course with all the helping features available.
- Class Participation, behavior, and attitude in the class is also part of your class work assesment.
- The department offers an extra class. This class is used to solve some homework problems, previous exams, and offer extra help. Some quizzes are also held during this class. All students are recommended and required to attend these tutorial classes.

Exams:

- At least Two Class Tests will be given during the term. These exams count for **25%** of your total grade. The dates and materials for these tests will be provided by your instructor.
- A Final exam given at the end of the term covering all the subjects taken during the term and is worth **50%**.

Math Department Website:

- A student can visit “The Math Department Page” through the Mathematical Sciences Website (www.psu.edu.sa/math) where he can find several helping information such as the syllabi for all math courses, useful links to help the student in his study, and a huge collection of the previous midterm and final exams that were administered by the Department through the previous semesters.

Calculators:

- Only Scientific Calculators are allowed in this course. (No Graphing Calculators)

Office Hours:

- Check the table posted on your instructor's door for the office hours incase you need assistance or you need to inquire about matters concerning your marks, absence, and so on.

Grading Policy:

Class Tests: 25% ; Quizzes: 10% ; Attendance 5% ; Participation 5% ; Online Homework 5% ; Final : 50%



PRINCE SULTAN UNIVERSITY
Department of Mathematical Sciences

MATH 001 HOMEWORK PROBLEMS
Blitzer, Fourth Edition

SECTION	PAGE	PROBLEMS
P.1	15	11, 13, 15, 25, 31, 41, 47, 55, 59, 63, 69, 73, 89, 93, 95 , 153, 155
P.2	31	5, 7, 13, 17, 19, 21, 25, 29, 33, 37, 39, 41, 43, 47, 51, 55, 57, 61, 63, 109 , 111
P.3	46	11, 15, 17, 21, 25, 29, 31, 35, 39, 41, 43, 49, 53, 59, 63, 65, 71, 73, 77, 79, 87, 89, 91, 93, 97, 99, 105, 107, 111, 113
P.4	58	3, 7, 11, 13, 17, 25, 29, 31, 35, 37, 43, 47, 53, 57, 61, 65, 67, 71, 75, 77, 81, 83, 87, 89
P.5	71	5, 9, 13, 15, 19, 25, 29, 37, 41, 47, 51, 55, 59, 63, 67, 71, 75, 81, 85, 87, 89, 95, 99, 101, 103, 107, 111, 113
P.6	82	3 , 5, 9, 11, 15, 19, 21, 25, 29, 31, 35, 39, 41, 45, 49, 51, 53, 57, 59, 63, 71,73
Review	86	1, 7, 8, 11, 21, 25, 29, 31, 42, 45, 47, 51, 55, 61, 67, 69, 73, 77, 79, 81, 87, 93, 101, 103, 107, 113, 117, 119
1.1	97	13, 17, 21, 23, 25, 41, 43, 45
1.2	112	3, 9, 11, 23, 25, 33, 37, 43, 45, 49, 55, 59, 63, 67, 69, 71, 77, 79, 87, 91, 95
1.4	135	3, 5, 11, 15, 19, 21, 27, 31, 35, 39, 41, 47, 51
1.5	152	2, 7, 9, 13, 17, 23, 29, 37, 51, 57, 63, 67, 71, 77, 81, 85, 91, 97, 103, 107, 127, 129
1.6	168	3, 7, 9, 13, 17, 27, 29, 31, 33, 35, 39, 41, 49, 57, 59, 63, 65, 69, 73, 87, 95, 97, 133
1.7	185	3, 11, 21, 29, 33, 39, 41, 45, 49, 55, 57, 63, 73, 77, 79, 85, 91
Review	191	1, 7, 19, 27, 33, 55, 57, 59, 63, 67, 69, 71, 75, 87, 89, 91, 93, 95, 99, 115, 117, 119, 121

2.1	210	5, 9, 11, 13, 17, 21, 31, 33, 35, 41, 53, 59, 61, 67, 69, 79, 83, 87, 95, 97
2.2	223	3, 9, 19, 23, 27, 29, 37, 39, 41, 47, 51, 55, 57, 59, 61
2.3	239	3, 7, 13, 19, 23, 27, 29, 35, 37, 45, 59, 63, 71, 79, 81, 107
2.4	250	1, 3, 5, 7, 9, 11, 13, 15, 21, 23, 45
2.5	266	5, 9, 21, 25, 31, 49, 57, 63, 71, 79, 93, 103
2.6	279	7, 11, 19, 23, 27, 35, 41, 45, 51, 57, 61, 67, 71, 81, 89, 93
2.7	290	3, 7, 15, 19, 25, 27, 29, 33, 37, 41, 45, 53, 57
2.8	300	7, 13, 15, 21, 25, 29, 37, 43, 45, 51, 55, 81
Review	304	5, 9, 15, 17, 19, 23, 25, 29, 35, 37, 47, 55, 57, 71, 75, 77, 79, 83, 87, 91, 95, 97, 99, 103
3.1	324	3, 5, 11, 13, 21, 29, 37, 39, 43, 45, 53, 91
3.2	338	3, 9, 13, 15, 19, 23, 27, 31, 35, 39, 41, 47, 55, 57
3.3	350	5, 15, 21, 23, 25, 31, 35, 39, 41, 43, 45, 67, 71
3.4	361	25, 27, 29, 31
3.6	391	3, 7, 11, 15, 21, 29, 31, 33, 39, 45, 55, 63, 65, 97
Review	406	3, 5, 13, 17, 19, 23, 27, 29, 31, 33, 35, 49, 61, 63, 73, 75

- The **bolded** questions are from the *Practice Plus* and *Critical Thinking* sections of the Exercise Sets. Some of these questions will be included in the exams.
- You are advised to do as many questions as possible, class-by-class, week by week. These questions will help to strengthen your understanding of the material taught in class. If you have any problems see your instructor.