Mathematics 072 S01
Advanced Mathematics 1
Spring/Summer 2014

Instructor: Gemma Cuizon
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Schedule:

Time	Monday	Tuesday	Wednesday	Thursday	Friday
4:45 pm - 5:20 pm	Office Hours E250		Office Hours E250		
5:30 pm - 7:50 pm	Math 072/073 S01 E348		Math 072/073 S01 E348		

Important Dates:

May 5	First day of Math 072/073 SP class
May 19	Victoria Day – College is closed.
May 20	Fee deadline
July 1	Canada Day – College is closed.
July 7	Last day to withdraw from the course or change to audit
August 4	British Columbia Day – College is closed.
August 14	Last day of writing tests at the Math Help Centre

Prerequisites: The minimum requirement is a **recent "**C" in Math 053, or in Principles of Math 10, or Foundations of Math & Pre-calculus 10, or Foundations of Math 11, or Applications of Math 12, or Math 057; **or** a "B" in Applications of Math 11; **or** a "C-" in Principles of Math 11, or Pre-calculus 11; or assessment.

Exit Grade: You need a grade of C+ in 072 to continue into Math 073 and most college programs.

Required Textbook: ***Intermediate Algebra*, 11th Edition, Marvin Bittinger**
In the bookstore, new textbooks come packaged with the Student's Solution Manual, and a Trigonometry booklet that we use in Math 073.

Other Supplements: DVD's (on reserve on the main laibrary) and videotapes (in the Math Help Centre E342)

Workload

The course completion time will vary for each student, depending on a number of factors to be discussed with the instructor when the **individual learning plan** is developed. Factors include the students' beginning level of math skills, motivation, learning rate, and how much time they can actually study and attend class. It takes 2 – 4 hours to read through one section and do both the margin exercises and enough exercises in the exercise set to feel comfortable with the material. There are 35 sections in this course; this means that you have between **70 – 140 hours of work** ahead of you not including study time for tests and the final exam! If you work 5 days a week on this course, then you need to put in 2 – 4 hours a day to finish the course in one term. There is lots of help available; you can ask me questions during class or during office hours, you can get help from the math tutors in the help centres.

Course Content: MATH 072 is an algebra course that articulates as the first half of Principles of Math 11. However, those of you who have taken Math 11 will notice that 072 has quite a different flavour; we emphasize algebra skills and we only use a calculator when necessary. Topics include an arithmetic and algebra review; linear equations and inequalities in one variable; an introduction to functions; a comprehensive study of linear functions; system of linear equations in two variables; linear inequalities in two variables; polynomials; and rational exponents. Applications are sprinkled throughout the course. We cover the following sections in the textbook.

Unit 1: Ch R Review of Basic Algebra	R.1 – R.7
Unit 2: Ch 1 Solving Linear Equations and Inequalities	1.1 – 1.6 (omit 1.6e)
Unit 3: Ch 2 Graphs, Functions and Applications	2.1 – 2.6
Unit 4: Ch 3 System of Equations	3.1 – 3.4a, 3.7ab
Unit 5: Ch 4 Polynomials and Polynomial Functions	4.1 – 4.7

Homework for Unit 1 (Ch R) – No Calculator

Unit 1	Section	Margin Exercises	A Bit More Practice	Lots More Practice
R.1	The set of real numbers	all	1 – 23, 69 – 73	1 – 73
R.2	Operations with real numbers	all	23, 45 – 55, 67 – 77, 85, 99, 111 – 121, 129, 133 – 142 all, 143	1 – 129, 133 – 142 all, 143
R.3	Exponential notation and order of operations	all	31, 35, 37, 61, 67, 85, 91, 97, 105, 107, 123, 129	1 – 107, 111 – 122 all, 123, 129
R.4	Introduction to algebraic expressions	all	7, 23, 25, 35, 37, 41	1 – 43, 47 – 56 all, 57, 59
R.5	Equivalent algebraic expressions	all	7 – 27, 37, 39, 47, 51, 55, 59, 63 – 63 all	5 – 59, 63 – 68 all
R.6	Simplifying algebraic expressions	all	9, 21, 35, 41, 43, 53, 57, 65, 67, 93	1 – 69, 71 – 86 all, 91, 93
R.7	Properties of exponents and scientific notation	all	11, 19, 29, 37, 61, 65 – 75, 99, 119, 121	1 – 107, 113 – 118 all, 119, 121
Important Properties		Also review the definitions of the **sets of real numbers on** p2 – 5. Making and using flash cards are a great way to learn definitions.		
Reinforce Concepts		True and false questions can be hard; don't be discouraged.		
Ch R Test		No calculators and no checking answers until you have finished this practice test! Grade yourself; hard questions are worth 2 marks each and other questions are worth 1 mark each. If you are satisfied with the results, then you are ready for the Unit 1 Test.		

Homework for Unit 2 (Ch 1)

Unit 2	Section	Margin Exercises	A Bit More Practice	Lots More Practice
1.1	Solving Equations	Start at #9	33, 35, 47, 77 – 83, 103	13 – 83, 103
1.2	Formulas and applications	All	23 – 29, 35, 47 – 51	1 – 29, 35, 47 – 51
1.3	Applications and problem solving	All	1 – 31	1 – 31
1.4	Sets, inequalities, and interval notation	All	33, 35, 57 – 87, 101, 105	1 – 87, 101, 105
1.5	Intersections, unions, and compound inequalities	All	9, 11,35,37,55,59–67, 69 – 78 all, 79 – 91	1 – 67, 69 – 78 all, 79 – 91

1.6	Absolute-value equations and inequalities	1 – 19	47 – 55, 59, 63, 67, 109 – 116 all	1 – 69, 109 – 116 all
Concept Reinforcement				
Important Properties		You may omit the Principles for Solving Inequalites Involving Absolute Value at the bottom of the page.		
Ch 1 Test 1 – 42		No checking answers until you have finished the test! Grade yourself; word problems and hard questions are worth 2 marks each and other questions are worth 1 mark each. If you are satisfied with the results, then you are ready for the Unit 2 Test. If you want more practice, choose from the questions below.		
Review Exercises		Find questions in these exercises that are similar to the ones that you had trouble with in the chapter test.		

Homework for Unit 3 (Ch 2) – No Calculator

Unit 3	Section	Margin Exercises	A Bit More Practice	Lots More Practice
2.1	Graphs of Equations	All	45, 49	1 – 53, 55 – 58 all
2.2	Functions and Graphs	All	5, 9,19c, 19f, 25f, 31, 39, 43, 49,61,67 – 74, 75	1 – 65, 67 – 74 all, 75
2.3	Finding Domain and Range	All	1, 11, 19, 21, 23, 33, 37, 41 – 50 all	1 – 39, 41 – 50 all
2.4	Linear Functions: Graphs and Slope	All	15, 17, 19, 27, 33, 37, 41 – 50 all	1 – 35, 39 – 47 all
2.5	More on Graphing Linear Equations	All	1 – 10, 11, 13, 19, 29, 33, 35, 39, 47, 55, 71 – 81	1 – 55, 71 – 81
2.6	Finding Equations of Lines; applications	All	35, 41, 45 – 53, 62, 63, 65	1 – 53, 62, 63, 65
Concept Reinforcement				
Important Properties		Also learn the definitions of **function**, **domain** and **range** and know the **vertical line test**		
Ch 2 Test 1 – 36		When you finish a test, check the answers and grade yourself. No peeking at the answers until you have completed a test. Use your calculator sparingly.		
Review Exercises		All		

Homework for Unit 4 (Ch 3)

Unit 4	Section	Margin Exercises	A Bit More Practice	Lots More Practice
3.1	Systems of Equation	1 – 7	3, 13, 15, 21, 23, 25, 30	1 – 25, 30
3.2	Solving by Substitution	All	17, 19, 21, 31, 33	1 – 21, 27, 31, 33
3.3	Solving by Elimination	All	13, 21, 25, 27, 29, 31, 49, 51	1 – 31, 49, 51
3.4a	Applied Problems in Two Variables (Motiion problems are only tested in Math 073)	All	5, 7, 11, 13, 15, 17, 21, 23, 25, 27	1 – 39
3.7ab	Systems of Inequalities (omit c)	1 – 6	1 – 7, 9, 10 17, 25	1 – 7, 9, 10 1 – 29
Concept Reinforcement				
Vocabulary and Rules		Know the meaning of consistent & inconsistent systems of		

	equations and dependent & independent equations
Chapter 3 Test	1 – 11, 13, 15, 16
Review Exercises	All

Homework for Unit 5 (Ch 4)

Unit 5	Section	Margin Exercises	A Bit More Practice	Lots More Practice
4.1	Introduction to polynomials and polynomial functions	All	25, 29, 75, 79	1 – 29, 35 - 79
4.2	Multiplication of polynomials	All	41, 43, 75, 79, 81, 89, 91, 103	1 – 91, 103
4.3	Introduction to factoring	All	23, 27, 37 – 41, 49, 57 – 64 all, 65, 67, 75, 77	11 – 49, 57 – 64 all, 65, 67, 75, 77
4.4	Factoring trinomials: $x^2 + bx + c$	All	13, 17, 23, 25, 39	1 – 39
4.5	Factoring trinomials: $ax^2 + bx + c$, $a \neq 1$	All	Start with the FOIL method (trial and error); switch to the ac-method as needed 33 – 51, 69 – 81	1 – 51, 69 – 81
4.6	Special factoring	All	Matching p378:1 – 10 , 27, 29, 41, 51, 59 – 67, 89, 91, 99, 103, 105, 125, 131	Matching p378: 1 – 10, 1 – 105, 125, 131
4.7	Factoring: a general strategy	All	21 – 27, 33, 37, 41 – 53, 59 – 69	1 – 53, 59 – 69
Properties and Formulas		1. classification of polynomials by the number of terms and degree 2. squaring a binomial (in your head) 3. factoring formulas (diff. of squares, sum/diff of cubes) 4. Principle of Zero Products		
Function Notation: Sections 2.2, 4.1, 4.2		Study about evaluating functions or how to find function values, and also how to find x-values for which the function value is given.		
Chapter 4 Test : All		No peeking at the answers until you have finished the test! Grade yourself; hard questions are worth 2 marks each and the other questions are worth 1 mark each. If you are satisfied with the results, then great! If you want more practice, choose from the suggestions below.		
Review Exercises		All		

Homework for the Final Exam

- Work through the Cumulative Review questions. If you are having trouble with a question, return to that objective and redo some extra problems
- The first part (about 40%) of the final exam is done without calculator and the second part (about 60%) is done with calculator. There are no rewrites for the final exam.

Word Problems	Sections 1.3, 1.4, 2.6, 3.2, 3.3, 3.4, 3.8, 4.8
Rearranging Formulas	Section 1.2
Exponent Rules	Sections R.7
Function Notation Sections 2.2, 4.1, 4.2	Sections 2.2, 4.1, 4.2

Access Math Lab: **Ewing 342 and Ewing 224:** This drop-in centre is freely available for your use to work on math homework and to seek help from the tutor on staff (see hours posted on door).

Calculator Policy: As per Math Department policy, the only calculator permitted for use on quizzes and the final exam is the Sharp EL-531X scientific calculator. No other make/model of calculator is permitted, nor are other electronic devices such as cell phones, PDAs, laptop computers, electronic translators, etc.

Calculators will not be allowed on certain quizzes and/or portions thereof. The final exam will have a component worth 40% that must be done without the aide of a calculator.

No calculators will be allowed on Tests 1 and 3, and part of the final. It is wise to do as much of the exercises without a calculator as possible.

Course Objectives: The four very ambitious objectives of the course are:

- To learn the basic algebra skills necessary to be successful both in your chosen field of study and in future math courses. This involves learning the vocabulary, notation, rules, and techniques of intermediate algebra, as well as solving applied problems.
- To do basic arithmetic without a calculator.
- To learn to write mathematics correctly.
- To be able to explain the concepts involved in problem solving.

Assessment (Grades)

Your mark is based on 5 tests and an exam. If you get less than 65% on a test you must rewrite it. If you get more than 65% you have the option of rewriting it once. All test marks will count towards your final mark. To re-register for the course for one extra term, you must have at least 75% of the work done or at least have 75% attendance.

You can choose to write the tests when you feel you are ready. It is strongly recommended that you complete the suggested homework and do the Summary & Review and the Chapter Test which accompanies each unit. You must get permission of your instructor to write the test and final exam.

All tests and the final exam is written in the math lab in E342 during math lab hours which are posted on the math lab door and on my website. Please be aware that lab hours may change during the term due to staff availability. Please allow one and a half hours to write the tests and 3 hours to write the final exam. If you want to complete the course in one term, you should plan to write a test every 2-3 weeks.

Grade Calculation:	5 Tests	50%
	Final Exam	50%

- There is **no rewrite for the final exam**. If the average of your term mark and your exam mark is not high enough to proceed into Math 073 or your chosen program, then you need to repeat Math 072. But, don't be discouraged. It will likely go much quicker the second time through.

Grade Scale:

0-49	50-59	60-64	65-69	70-72	73-76	77-79	80-84	85-89	90-100
F	D	C	C+	B–	B	B+	A–	A	A+

NS You will be assigned a "no show" grade if you do not attend the first class and you do not contact your instructor within two days of the first class. Your seat may have been given away to a waitlisted student. If room is available, you may re-register for the course with permission of the instructor.

W If you find that you are too busy to work on the course, then you need to officially withdraw before **July 10** to avoid getting an F for the course.

IP An "in-progress" grade is only given in self-paced courses. If you have not finished the course at the end of the term but have attended at least 75% of the classes or have successfully completed at least 3 unit tests that term, then you may be awarded an IP grade. You may only receive two IP grades for a course; the third time you register for the course, you will be assigned an F if you do not complete the course.

"Never mistake knowledge for wisdom. One helps you make a living, the other helps you make a life." Good luck this term!!!

Good Luck

The School of Access asks that we provide you with the following addition information.

Academic Progress: The College has an academic progress policy to improve your likelihood of success. To view the policy, see Sec E-1.1 on the policy webpage www.camosun.bc.ca/policies.html.

Learning Support There are a variety of services available for to assist you throughout your learning. This information is available in the College calendar, at Student Services or the college web site at camosun.ca.

Student Conduct There is a Student Conduct Policy which includes plagiarism. It is your responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services and on the College web site in the Policy Section www.camosun.bc.ca/policies/policies.html.

Suggested Pacing Schedules

- **Please note that you can take up to 2 terms to complete a course if you need it.**
- **Some chapters may require more time, others less. You can write tests anytime the math lab is open, not just on class days.**

SUGGESTED SCHEDULE TO COMPLETE IN ONE TERM

Wk		Monday	Tuesday	Wednesday	Thursday	Friday
1	May	5 Classes start R.1	6 R.1	7 R.2	8 R.2	9 R.3
2		12 R.3	13 R.4	14 R.4	15 R.5	16 R.5
3		19 ***Victoria Day***	20 R.6	21 R.7	22 R.7	23 Review Ch R
4		26 **Unit 1 Test**	27 1.1	28 1.2	29 1.3	30 1.3
5	June	2 1.4	3 1.5	4 1.6	5 1.6	6 Review Ch 1
6		9 Review Ch 1	10 **Unit 2 Test**	11 2.1	12 2.1, 2.2	13 2.2
7		16 2.3	17 2.4	18 2.5	19 2.6	20 2.6
8		23 Review Ch 2	24 Review Ch 2	25 **Unit 3 Test**	26 3.1	27 3.2
9	July	30 3.3	1 ***Canada Day***	2 3.4a	3 3.4a	4 3.7ab
10		7 Review Ch 3	8 Review Ch 3	9 **Unit 4 Test**	10 4.1	11 4.1
11		14 4.2	15 4.3	16 4.4	17 4.5	18 4.5
12		21 4.6	22 4.6	23 4.6	24 4.7	25 Review Ch 4
13		28 Review Ch 4	29 Review Ch 4	30 **Unit 5 Test**	31 Review for Final Exam	1 Review for Final Exam
14	Aug	4 ***British Columbia Day***	5 Review for Final Exam	6 Review for Final Exam	7 Review for Final Exam	8 Review for Final Exam
15		Aug 11 – 15 Catch-up week; **last** chance to write a test or final exam is **Thursday Aug. 14**.				

My Math 072 Pacing Schedule Spring/Summer 2014

Wk		Monday	Tuesday	Wednesday	Thursday	Friday
1	May	5	6	7	8	9
2		12	13	14	15	16
3		19 ***Victoria Day***	20	21	22	23
4		26	27	28	29	30
5	June	2	3	4	5	6
6		9	10	11	12	13
7		16	17	18	19	20
8		23	24	25	26	27
9	July	30	1 ***Canada Day***	2	3	4
10		7	8	9	10	11
11		14	15	16	17	18
12		21	22	23	24	25
13		28	29	30	31	1
14	Aug	4 ***British Columbia Day***	5	6	7	8
15		Aug 11 – 15 Catch-up week; **last** chance to write a test or final exam is **Thursday Aug. 14**.				

Lansdowne Self-paced Courses Spring/Summer 2014

Instructor Information

Instructor: Gemma Cuizon Lansdowne Office: E250
Phone: 370-3321
Office Hours: 4:45pm-5:20pm (E250) Mon. & Wed.
E-mail: cuizon@camosun.bc.ca

Tips for Success

1. Come to class every day. If you don't attend class, it's easy to fall behind and much tougher to catch up as you have to relearn the material.
2. Do the suggested exercises from your course outline. Work through the problems thoughtfully, not just to get them done. Think about what the instruction means, what a similar question might look like on the test and what are some of the pitfalls that you need to avoid.
3. Try to find time to do at least a bit of math at least 5 days a week. On your timetable, schedule time each day for your math homework; it is really important to establish a routine. You can't put your math course on the back burner and hope to cram it in at the end.
4. Do the questions thoughtfully rather than just trying to get them over with! Think about the principles and strategies involved.
5. If you don't understand something seek help right away from your instructor or from the tutors in the Math lab in E224 and E342.
   Math lab hours: Mon – Friday 10:30pm – 2:30pm (E224)
   Mon – Thursday 5:00pm – 8:00pm (E342)
6. Keep working, stay positive and do the best you can given all the other demands in your life.

Class Protocol

1. Sign in so your instructor knows that you're attending.
2. Bring your textbook, calculator and work materials to every class.
3. Work quietly. I encourage you to help each other but please keep the noise level down and keep cell phones on vibrate mode. If you would like to work with a partner or in a group, please feel free to use the math lab. If you would like to take a break from math (and this is totally understandable) please chat outside the classroom.
4. If you bring snacks to class please tidy up afterwards. Let me know if you have any relevant allergies. Thanks.
5. If you need help and I'm with another student, please put your name on the board so I know you're waiting. If others are waiting, I may have to limit the time I spend with you e.g. 2 questions at a time.
6. When doing the exercises, label each question clearly, write out the question and show your work. This makes it easy to review for the test and to get help if you don't understand.
7. If you have trouble with an exercise, highlight the question and make a note in your margin about what you don't understand. When you ask for help in class, bring the question and your work for the instructor to see. Be organized!