

MTH 95 – INTERMEDIATE ALGEBRA

Self-Paced and VARIABLE CREDIT (1, 2, 3, 4, or 5)

I have enrolled for _____ credits of Math 95, computer registration number (CRN)_____.

REQUIRED TEXT with On-Line Access Code:**Introductory and Intermediate Algebra**, 3rd Edition, by Robert Blitzer
Pearson Prentice Hall Publishing Company + MyMathLab On-Line Access Code**SUPPLEMENTARY RESOURCES:**

1. Get help from the tutors that are available in the MRC Tutoring Room 163.
2. Use the quiet study room if Room 163 is too noisy.
3. Check out individual math topic Video Tapes from the Reception Counter staff.
4. Refer to the "Student Solutions Manual" if you get stuck.
5. Use on-line MyMathLab resource materials.
6. Take practice tests before the graded tests. Go to the MRC Reception Counter, Room 169.

OVERVIEW OF COURSE:

Credit	Chapter and Topic	Test covers
1 st credit	Chapter 1, 2, 3, 4, and 5 Review	Test 1: Chapters 1 – 5
	Chapter 6 Review + A few new topics	Test 2: Chapter 6
2 nd credit	Chapter 7.1 – 7.8, Rational Expressions, Rational Equations, Proportions, Variation	Test 3: Ch. 7.1 – 7.8
3 rd credit	Chapter 8.1, 8.2, 9.1, 9.2, 10.1 – 10.4 Introduction to Functions, Inequalities, Radical Expressions and Rational Exponents	Test 4: Chapters 8.1 – 8.2, 9.1 – 9.2 10.1 – 10.4
4 th credit	Chapter 10.5 – 10.7, Radicals, Radical Equations, and Complex Numbers Chapter 11.1 – 11.4, The Square Root Property, Completing the Square, Quadratic Eqns. and Functions	Test 5: Chapters 10.5 – 10.7 11.1 – 11.4
5 th credit	Chapter 12.1 – 12.3, Introduction to Exponential and Logarithmic Functions Final Cumulative Review - Chapters 1 through 12	Test 6: Chapters 12.1 – 12.3 All Chapters 1-12

NOTE: We assume that you have the beginning and elementary algebra background skills to prepare you for this course. Math 95 begins with a brief review and has some repetition of concepts seen in Math 60 and 65. If you lack the prerequisite algebra skills please consider enrolling in either Math 60, 65, or 70 before taking Math 95.

CALCULATOR: A scientific calculator is useful and required in this course. However, we encourage you to do most of your numeric work in this course by hand (to reinforce basic skills) THEN use a calculator to check your work. Some exams do not allow use of calculators with the intention of helping you to maintain computational skills.

HINTS FOR SUCCESS and HOW TO DO YOUR HOMEWORK:

1. Establish a regular daily schedule for doing your math homework and stick with it.
2. Try to do your work in the Math Resource Center where tutor help is available when you need it.
3. Try to stay on schedule to meet your suggested “On Schedule” test dates.
4. Use the tutors and video tapes.
5. Follow the Lesson/Homework Assignment guide on the following pages.
6. Before starting on the assigned homework, study the text discussion & examples and work “check point” problems for practice.
7. Then, neatly work homework problems on your own paper. Try to do them without looking at examples or a solutions manual. You must show each step of your solution. Then grade yourself. Try to fix your mistakes and then get tutor help or refer to the Student Solutions Manual.
8. Finally, take your completed homework assignment and *Study Guide* to a tutor to verify completion and receive their stamp of approval.

HOW TO BE PREPARED & TAKE EXAMS IN THIS COURSE:

1. Complete your homework and check it as described above in “Hints for Success.”
2. After all the assigned work has been checked by a tutor, we suggest you try to work the *Chapter Test* in the text without looking at any solved problems. Grade it and get help if needed. Now you are almost ready to take the graded test.
3. With your *tutor stamped Study Guide* go to the Reception Counter and ask for a *Practice Module Test*. Since the only difference between practice and graded tests is that your score on the practice test will not count, taking a practice test gives you a realistic, objective check of your skill level without affecting your grade for the course. Work each question on the test like you did in your homework, showing each step. You are allowed to take more than one practice test, if you so choose. When your practice test score is above 80%, you should be ready to take the graded exam.
4. Once you have completed Steps 1, 2, and 3 you are ready to take the *Graded Module Test*. Go to the Reception Counter, show your *Study Guide*, and check in to take the test for a grade. Relax, take your time, show your work, and demonstrate what you have learned. We want you to earn a score of 80% or better before you test on material from the next set of homework assignments.

NOTE:

Homework will receive a date stamp from a tutor only if it is done neatly with step-by-step solutions shown.

All graphing should be done using graph paper.

**A PAGE OF ANSWERS WITHOUT WORK SHOWN
WILL NOT BE ACCEPTED.**

BEST WISHES & GOOD LUCK !!

CREDIT #1: Chapter 1 – 6, Comprehensive Review of Math 60 and Math 65

Student Name: _____

Procedure Quiz Completed: _____

(Date stamp by Tutor)

You must show step-by-step solutions (not just a list of answers) to receive credit for your work.

Odd = 1,3,5,7,9,etc., Eoo = every other odd: 1,5,9,13,17,21, etc.

LESSON Chapter & Section	HOMEWORK ASSIGNMENT	Date Stamp from tutor when completed
Credit #1: Review of Chapters 1 through 6 This credit is a quick review of Math 60, Math 65, and several “new” topics that were not covered in earlier courses.	Topics assigned from sections 5.4 and 6.4 are not included in Math 60 or 65.	
Chapter 1 Test (end of Chapter 1)	All 1-27.....	/ /
Chapter 2 Test (end of Chapter 2)	All 1-33.....	/ /
Chapter 3 Test (end of Chapter 3)	Odd 1-11; All 13-19.....	/ /
4.2 Solving Systems of Linear Equations (Substitution).....	3, 7, 9, 13, 21, 25, 29, 35...	/ /
4.3 Solving Systems of Linear Equations (Addition).....	5, 13, 17, 29, 31, 39, 47,57.	/ /
4.4 Problem Solving Using Systems of Equations	3, 11, 17, 19, 29, 33, 35, 39, 43, 45.....	/ /
Chapter 4 Test (after Chapter 4 Review Exercises)	Odd 1-11; All 14-16.....	/ /
5.1 Adding and Subtracting Polynomials	9, 13, 15, 21, 55, 61, 65.....	/ /
5.2 Multiplying Polynomials	5, 7, 9, 11, 13, 17, 19, 21, 23, 29, 31, 33, 45, 51, 53, 61, 63, 65, 71, 73.....	/ /
5.3 Special Products	7, 15, 23, 27, 43, 47, 49,55.	/ /
5.4 Polynomials in Several Variables	7, 8, 9, 15, 27, 29, 33, 37, 47, 55, 59, 63, 67.....	/ /
5.5 Dividing Polynomials	1, 3, 7, 9, 11, 17, 21, 23, 27, 31, 35, 43, 45, 49, 53, 57, 61, 75, 77.....	/ /
5.7 Negative Exponents and Scientific Notation	Eoo 1-77; Odd 81-87; Odd 93-125.....	/ /
Chapter 5 Test (after Chapter 5 Review Exercises)	Odd 1-31 (omit 19).....	/ /
It is HIGHLY recommended that you take the Practice Test (even more than once if necessary) to confirm your skill level before taking the graded test.		
Practice Test: score _____ date: _____ Graded Test: score _____ date: _____	Take Test #1 (Calculator Use OK)	“On Schedule” Test Date: _____

Answer to problem 5.4, #8: coefficients of terms are 12, -5, -1, and 4; degree of terms are 5, 10, 2, 0; Poly degree 10.

CREDIT #1 (continued):

You must show step-by-step solutions (not just a list of answers) to receive credit for your work.

Odd = 1,3,5,7,9,etc., Eoo = every other odd: 1,5,9,13,17,21, etc.

LESSON Chapter & Section	HOMEWORK ASSIGNMENT	Date Stamp from tutor when completed
Credit #1 (continued): Review of Chapter 6		
6.1 The Greatest Common Factor and Factoring by Grouping (focus on multivariable expressions) * Obtain Factoring Handout from Tutor *	5, 11, 25; Odd 43-59; 65, 69, 71, 73, 77, 79, 83, 84...	/ /
6.2 Factoring Trinomials Whose Leading Coefficient is One (focus on multivariable expressions)	19, 25, 37, 47, 61; Odd 63-69.....	/ /
6.3 Factoring Trinomials Whose Leading Coefficient is Not One (focus on multivariable expressions)	Odd 43-57; Odd 79-89.....	/ /
6.4 Factoring Special Forms (sum/difference of cubes)	13, 19, 25, 27, 31, 33, 45, 57, 61; Odd 71-87; 99.....	/ /
6.5 A General Factoring Strategy	Eoo 1-93; 107, 109.....	/ /
6.6 Solving Quadratic Equations By Factoring	1, 3, 5, 7; Eoo 9-53; 67, 69, 70, 71, 83, 87, 114.....	/ /
Chapter 6 Test (after Chapter 6 Review Exercises)	All 1-30.....	/ /
It is HIGHLY recommended that you take the Practice Test (even more than once if necessary) to confirm your skill level before taking the graded test.		
Practice Test: score _____ date: _____ Graded Test: score _____ date: _____	Take Test #2 (Calculator Use OK) End of Credit #1	“On Schedule” Test Date: _____

Answer to **even numbered problems** from assignments above:

84: $2x^2(x+2)(4x^3-5x-1)$, 70: $9/2$ sec., 114: $4/x^6$

CREDIT #2: Rational Expressions & Equations, Proportions, and Modeling Using Variation

You must show step-by-step solutions (not just a list of answers) to receive credit for your work.

Odd = 1,3,5,7,9,etc., Eoo = every other odd: 1,5,9,13,17,21, etc.

LESSON Chapter & Section	HOMEWORK ASSIGNMENT	Date Stamp from tutor when completed
Credit #2: Chapter 7.1 – 7.8	Some of this material is review from Math 65.	
7.1 Rational Expressions and Their Simplification.....	Eoo 1-93; All 104-107; 117.....	/ /
7.2 Multiplying and dividing Rational Expressions.....	Eoo 1-73.....	/ /
7.3 Adding and Subtracting Rational Expressions with the Same Denominator.....	Eoo 1-69; 71, 74; All 81-84.....	/ /
7.4 Adding/Subtracting Rational Expressions with Different Denominators.....	Eoo 1-89; 91; 95, 98, 101, 108, 110, 121, 122.....	/ /
7.5 Complex Rational Expressions (Omit method used in Examples 1, 2, and 3).....	Odd 1-43; Odd 71-75.....	/ /
7.6 Solving Rational Equations	Odd 1-45; Eoo 47-75; All 96-98.....	/ /
7.7 Applications Using Rational Equations and Proportions (some Math 60 review).....	Odd 1-31; 47, 50; All 53-55.....	/ /
7.8 Modeling Using Variation	Odd 1-19; 23, 26, 29, 33, 37, 39, 57, 62.....	/ /
There are problems from Chapters 1-6 on this test. It is HIGHLY recommended that you take the Practice Test before taking the Graded Test!!!		
Practice Test: score _____ date: _____ Graded Test: score _____ date: _____	Take Test #3 (Calculator Use OK) End of Credit #2	“On Schedule” Test Date: _____

Answers to **even numbered problems** from assignments above:

104: F, 106: T, 74: $80/(t^2+4t+1)$ 13.33 & 6.15, 82: makes sense, 84: does not make sense, 98: yes & 10 years, 108: makes sense, 110: does not make sense, 122: $y = x - 1$, 96: $(x^3-3)(x+2)$, 98: $-20x+55$, 50: 8 hrs. & 24 hrs., 54: {6}, 26: 120 ft., 62: $6x(x-5)(x+4)$

CREDIT #3: Introduction to Functions, Inequalities, Radical Expressions and Rational Exponents

You must show step-by-step solutions (not just a list of answers) to receive credit for your work.

Odd = 1,3,5,7,9,etc., Eoo = every other odd: 1,5,9,13,17,21, etc.

LESSON Chapter & Section	HOMEWORK ASSIGNMENT	Date Stamp from tutor when completed
Credit #3: Chapter 8.1, 9.1 – 9.2		
8.1 Introduction to Functions (some Math 65 review)...	Eoo 1-29; All 43-46.....	/ /
8.2 Graphs of Functions (some Math 65 review).....	Odd 1-65.....	/ /
9.1 Reviewing Linear Inequalities and Using Inequalities in Business Applications.....	Eoo 1-13; Odd 15-23; Odd 27-33; 39, 41, 45, 47, 55, 59, 61, 82, 84.....	/ /
9.2 Compound Inequalities	Odd 1-31; Odd 39-51; 61, 63, 79, 81, 105, 111.....	/ /
Chapter 10.1 – 10.4 (part of this material is review from Math 65)		
10.1 Radical Expressions and Functions	Odd 1-19; Odd 23-53; Odd 57-89; 91, 93, 101, 103, All 123-125, 133.....	/ /
10.2 Rational Exponents	Eoo 1-37; Odd 39-111; All 113-115, 125, 127, 131, 133, 148, 160, 162.....	/ /
10.3 Multiplying and Simplifying Radical Expressions	Eoo 1-13; 15; Odd 21-37; Odd 41-85; 93; All 111- 114; 120, 121.....	/ /
10.4 Adding, Subtracting, and Dividing Radical Expressions.....	Eoo 1-13; Odd 15-27; Eoo 29-65; Odd 67-73; 81, 83, 84; All 101-106.....	/ /
There are problems from Chapters 1-7 on this test. It is HIGHLY recommended that you take the Practice Test before taking the Graded Test!!!		
Practice Test: score _____ date: _____ Graded Test: score _____ date: _____	Take Test #4 (Calculator Use OK) End of Credit #3	“On Schedule” Test Date: _____

Answers to Even numbered problems from assignments above:

44: T, 46: F, 82: 29, 84: $(5x+9)(5x-9)$, 124: F, 114: x^2-1 , 148: does not make sense, 160: $y = -2x + 11$,
162: $3a^2+6ah+3h^2-5a-5h+4$, 112: F, 114: T, 120: $\{(2, -4)\}$, 84: $3\sqrt{3}$ sq.ft., 102: F, 104: F, 106: $-31\sqrt{5}/12$.

CREDIT #4: Radicals (continued), Radical Equations, Complex Numbers & The Square Root Property, Completing the Square, Quadratic Equations and Functions

You must show step-by-step solutions (not just a list of answers) to receive credit for your work.

Odd = 1,3,5,7,9,etc., Eoo = every other odd: 1,5,9,13,17,21, etc.

LESSON Chapter & Section	HOMEWORK ASSIGNMENT	Date Stamp from Tutor when completed
Credit #4: Chapter 10.5 – 10.7 & 11.1 – 11.4:		
10.5 Multiplying with More Than One Term and Rationalizing Denominators.....	Eoo 1-37; Odd 39-63; Eoo 65-89; Odd 105-109; Odd 113-121; 139, 142, 143; All 146-148.....	/ /
10.6 Radical Equations	Odd 1-49; 55, 57, 59, 73; All 77-81; 86, 87.....	/ /
10.7 Complex Numbers (Omit concept of example 7)...	Odd 1-15; Eoo 17-45; Odd 47-83; Odd 101-105; 115, 131; All 137-140; 141, 144, 145.....	/ /
11.1 The Square Root Property and Completing the Square (Some Math 65 review).....	Odd 1-55; Eoo 57-93; 95, 97; Odd 105-121; All 137-140; 146.....	/ /
11.2 The Quadratic Formula (Memorize this formula)...	Odd 1-9; 13, 15; Odd 19-39; Odd 43-51; 65; Odd 73-81; 98, 100,101,104.....	/ /
11.3 Quadratic Functions and Their Graphs.....	Odd 1-15; Eoo 17-37; Odd 39-55; 59, 65; All 89-92; All 99-101.....	/ /
11.4 Equations Quadratic in Form.....	Eoo 1-29.....	/ /
Practice Test: score_____ date: _____ Graded Test: score_____ date: _____	Take Test #5 (Calculator Use OK) End of Credit #4	“On Schedule” Test Date: _____

Answers to **even numbered problems** from assignments above:

140: F, 142: F, 146: $(2x+7)/(x^2-4)$, 148: function, not function, 78: F, 80: F, 86: $(x+2)/[2(x+3)]$, 138: F, 140: T, 144: x^2/y^2 , 138: F, 140: F, 146: $(1-2x)(1+2x+4x^2)$, 98: T, 100: F, 104: 2.2 yds., 90: F, 92: F, 100: $x/(x-2)$

CREDIT #5: Introduction to Exponential and Logarithmic Functions & Final Cumulative Review

You must show step-by-step solutions (not just a list of answers) to receive credit for your work.

Odd = 1,3,5,7,9,etc., Eoo = every other odd: 1,5,9,13,17,21, etc.

LESSON Chapter & Section	HOMEWORK ASSIGNMENT	Date Stamp from tutor when completed
Credit #5: Chapter 12.1 – 12.3 + Final Review of Chapters 1-12		
12.1 Exponential Functions..... <u>Even answer: 82: $11/[(x-3)(x-4)]$</u>	Odd 1-15; Eoo 17-33; Odd 39-47; 53, 57; All 81-83....	/ /
12.2 Logarithmic Functions (Omit concept of examples 5 and 9)..... <u>Even answers: 114: F, 116: T, 120: $\{(-2,3)\}$, 122: $(-\infty, -7] \cup [-2, \infty)$</u>	Odd 1-37; 87, 91; All 113-116; All 120-122.....	/ /
12.3 Properties of Logarithms (Omit everything except the Change of Base Property; just examples 7 & 8)..... Even answers: 62: 1.5812, 64: 1.4595, 66: -2.4456 68: 5.2340, 124: $2y(xy^2)^{(1/3)}$	All 61-68 and All 122-124. Try the problems below without aid of examples.	/ /
Cumulative Review Exercises, Chapters 1-7 (end Ch.7)	All 1-20.....	/ /
Mid-Textbook Check Point (end of Chapter 7)	All 1-36.....	/ /
Cumulative Review Exercises, Chapters 1-9 (end Ch.9)	All 1-18 (omit 5,11,12,13)..	/ /
Cumulative Review Exercises, Chapters 1-10 (end of Ch.10)	All 2-20 (omit 1, 6, 14).....	/ /
Cumulative Review Exercises, Chapters 1-11 (end of Ch.11)	All 1-41 (omit 3, 7, 8, 13, 16, All 32-35).....	/ /
Chapter 12 Review Exercises (just before Ch.12 Test)	All 1-10; All 12-21; 48, 49.	/ /
It is HIGHLY recommended that you take the Practice Test (even more than once if necessary) to confirm your skill level before taking this graded final test.		
Practice Test: score_____ date: _____ Graded Test: score_____ date: _____	Take Test #6 (Calculator Use OK) End of Credit #5	“On Schedule” Test Date: _____

CONGRATULATIONS !!!

You have now completed the 5 credit Math 95 Course.

Consider continuing on with either a lecture class of Math 105 or Math 111.

**Most people keep a dictionary around the house for reference.
It might be a good idea for you to also keep your
Introductory & Intermediate Algebra book as a home reference.**