Course Syllabus

Math 20 — Pre-Algebra   **Section #1889, 4 units**

Professor Tim Busken   **MW, 5:30—7:20 pm**

Mail Station 17A/Email Address: tbusken@miracosta.edu   **Room SAN-304**

Course Home Page: timbusken.com/math20.html   **Break: 6:20-6:30 pm**

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eTextbook or textbook: (required) Prealgebra, 5th Edition by Alan Tussy and Diane Koenig

Students Solutions Manual (not required) Isbn 978-1-285-73807-9
Provides worked out solutions to all of the odd-numbered exercises in the textbook.

More Required Materials: Please maintain a notebook and a folder with your notes from class, group and lecture time. Bring you binder with you to every class, along with pencils (or erasable pens), erasers and your textbook. **Before you come to class, you should read the textbook and attempt the problems in the homework for each section.**

Final Exam Date: Monday, Dec. 12th, 5—6:50 pm

Grading:

Quizzes	10%
Homework	10%
Tests	60% (3 exams 20% each)
Final Exam	20%

Online Gradebook: The online gradebook is available when you login to MiraCosta's Blackboard system.

90% — 100%	A
80% — 89%	B
70% — 79%	C
60% — 69%	D
below 60%	F

Course Calendar: The course calendar is online on my website.

Free Tutoring!!! There are two places to get free tutoring on campus, and they are both located in the Library. The Tutoring & Academic Support Center TASC, Telephone 760.944.4449 X7748 offers tutoring by appointment, while the Math Learning Center MLC offers walk-in, no appointment necessary tutoring.

Course Description: This course prepares students for Elementary Algebra (MATH 30). Topics include operations on positive and negative numbers; fractions, decimals, and percents; perimeters, areas, and volumes of geometric figures; fundamental algebraic concepts; square roots; and applications.

Course Objectives: At the end of this course you should be able to
1). Apply order of operations agreement, rules of exponents, and field properties over the reals
2). Simplify arithmetic expressions involving signed numbers
3). Apply rules of signed numbers, exponents, binary operations, and the distributive property to

evaluate algebraic
expressions and combine like terms
4). Derive solutions to linear equations and validate the results
5). Translate applied problems with ratio, proportion, and percent into computation problems and solve
6). Apply geometric concepts to problem-solving
7). Evaluate and estimate square roots.

Student Learning Outcomes: (1) Apply the order of operations agreement and properties of rational numbers to simplify expressions. (2) Perform computations with rational numbers (fractions, decimals, and percents). (3) Students will be able to verify solutions of linear equations in one variable, solve linear equations in one variable, and translate applied problems into algebraic equations in one variable.

Calculators: Do not use a calculator to complete homework problems. Only use it to check. I will tell you what problems you may use a calculator for. If you are in doubt, assume calculator use is forbidden. The Final Exam will be given in two parts: one part is a non-calculator portion, and the other is a calculator portion. Tests may be given this way also.

Tests: There will be 3 tests (worth 20% each) and a comprehensive final worth 20%. **There will be no make up tests for any reason.** If you miss an exam due to unavoidable circumstances, and you have notified me in advance, then your final exam score will be substituted for the missed exam. If you miss more than one exam, the score of those missed exams will be zero. All exams count towards the final grade, no exams will be dropped.

Quizzes: There will be quizzes (worth 10% of your overall grade) given in class to make sure you are keeping up with the homework, and actually attending class and staying until the end. **There will be no make up quizzes for any reason.** However, at the end of the semester I will drop your lowest quiz score. Some quizzes may be unnannounced. Others will be scheduled. If you are not there for the quiz you cannot make it up.

Homework is worth 10% of your overall grade. The homework list is on the last page of this document. Homework is due on the day of the test. Late homework may be accepted with a 15% late penalty. Quizzes will be regularly given in class to make sure you are keeping up with the assigned homework. Do not let yourself get behind on homework in this class!

Attendance Policy: Our class meets for two hours, so it is better to come late than never. However, please avoid being habitually late. If you are late, it is your responsibility to check with me AFTER class that I didn't mark you absent. You may be dropped for any absence without notifying me by email during the first week. Late arrival and early departure from class can be counted as an absence. If you know that you will be absent or very late, please notify me by email me. In the event of an absence, you are responsible for all material covered in class, turning all assignments in on time and any schedule changes or class announcements.

In order to get the most out of this course, plan to attend each class regularly, arrive on time, and stay for the entire period. Since attendance is mandatory, you might be dropped after the fourth absence. Re-enrollment (which may occur once) is possible, but you must discuss it with me first. Again, attendance is your responsibility as are its consequences.

Success in this Course: Mathematics is a "learn by doing" subject. A good rule is to set aside eight to twelve hours per week to do your homework assignments and to complete other study and learning tasks. These tasks include: completing homework, reading the text, doing examples from the text, making outlines or 3x5 cards, memorizing formulas, rules or processes, viewing videos or getting help from your instructor or from peers in the Math Learning Center (MLC), or the Tutoring & Academic Support Center (TASC). Do not allow yourself to fall behind in your work. Catching up before a test is an extremely difficult task. Identify early on areas you need to work on and hold yourself accountable to seeking the help you need from tutoring. Allow for plenty of study time in your schedule. ALWAYS practice positive self-talk. Maintain a positive attitude.

Counselors: A big part of college is learning time management and how to deal with the combination of academic and personal stresses which occur throughout a time when you are attempting to be at your best. It takes many of us years to learn these critical life skills. Please know that our college has excellent resources in its counselors for everything from academic and personal advice to personal growth classes—classes which teach you about the excellent resources our campus has and where it's at, classes which teach you strategies for coping with stress, and what to do if you can't, and classes which provide strategies on how to study, set realistic goals and better manage your time.

Accommodation of Disability: Students with disabilities who may need academic accommodations should notify me in private within the first two weeks of instruction. MiraCosta College has a program called Disabled Students Programs & Services (DSPS), and DSPS will answer any questions you may have regarding eligibility requirements, support services, and how to obtain their services. Contact DSPS 760-795-6658 at for more information.

Academic Integrity: This class will be conducted in accordance with basic standards of academic honesty supported by MiraCosta Colleges Academic Standards & Policies, stated in the course catalog. In addition to disruptive behavior, harassment, or willful disobedience, cheating, plagiarism, or other forms of academic dishonesty are not acceptable and will not be tolerated. Students are expected to conduct themselves in an ethical manner that promotes a safe and harmonious learning environment while on the campus. Charges of misconduct and disciplinary sanctions may be imposed upon those who violate these standards of conduct, or provisions of college regulations.

Mobile Phone and Personal Electronics Use Policy: If you carry a mobile phone and/ or personal electronics, turn it/them OFF, or set it/them to Vibrating Mode while in class. Disrupting the learning environment with use of mobile phone and/or personal electronics is not good etiquette.

Drops: If you decide to drop the course, use SURF to drop yourself. Don't wait for me to drop you automatically. If I drop you and you want to be reinstated, see me quickly.

OUTLINE OF COURSE CONTENT
The course will address the following topics:

I. Arithmetic review
A. Place value
B. Binary operations on whole numbers
C. Rounding and estimating
D. Applied problems using concepts of geometry.

II. Integers
A. Binary operations
B. Order of operations
C. Addition and multiplication properties
D. Prime factorization, LCM, and GCF.

III. Solving equations
A. Simplifying algebraic expressions
B. Use of multiplication and addition properties
C. One variable
D. Applied problems.

IV. Fractions and decimals
A. Binary operations
B. Simplifying fractional expressions with variables in the denominator or numerator
C. Solving equations.

V. Ratio and proportion
A. Finding ratios and rates
B. Setting up proportions
C. Solving proportions
D. Solving applied problems involving proportions
E. Problems using concepts of geometry

VI. Percents, decimals, and fractions
A. Binary operations on fractions and decimals
B. Solving equations involving percents
C. Applications of percents

VII. Geometry and measurement
A. Lines and angles
B. Perimeter
C. Area, volume

VIII. Exponents and polynomials
A. Adding and subtracting polynomials
B. Properties of exponents
C. Multiplying polynomials
D. Introduction to factoring polynomials

Math 20 Homework List

- Chapters 1 and 2 homework is due on Wednesday, Sept. 28th

- Chapters 3 and 4 homework is due on Monday, Oct. 24th

- Chapters 5, 6, 7 and 8 homework is due on Monday, Nov. 28th

EOO means do "Every Other Odd" numbered problem

1.1	23 - 81 EOO		1.9	13 - 24 all
1.2	15,16,41,43,73,74,75,76		2.1	23 - 97 EOO
1.3	17 - 63 odd, 99		2.2	55 - 75 EOO, 84, 87
1.4	8, 23 - 37 odd, 99		2.3	61 - 81 odd, 89
1.5	21 - 89 EOO		2.4	21 - 67 EOO, 69 - 72 all
1.6	1 - 84 EOO		2.5	13 - 75 EOO
1.7	19 - 103 EOO		2.6	57 - 95 odd
1.8	25 - 36 all		2.7	53 - 85 odd

3.1	15 - 53 EOO			
3.2	11 - 49 EOO		4.3	13 - 87 EOO
3.3	21 - 83 EOO		4.4	11- 101 EOO
3.4	23 - 89		4.5	23 - 65 EOO
3.5	23 - 59 EOO		4.6	49 - 77 odd
4.1	21 - 107 EOO		4.7	15 - 21 odd, 35,37,53,68
4.2	17 - 75 EOO		4.8	61 - 85 odd

5.1	17 - 87 EOO		6.1	13 - 71 EOO
5.2	35 - 67 EOO		6.2	53 - 75 odd, 79
5.3	9 - 55 EOO		7.1	17 - 83 EOO
5.4	15 - 57 EOO		7.2	19 - 45 odd
5.5	15 - 102 EOO		7.3	13 - 47 odd
5.6	21 - 69 EOO		8.3	27 - 61 EOO
5.7	13 - 107 EOO		8.4	19 - 55 EOO

9.1	45 - 79 EOO		9.9	25 - 55 EOO
9.2	21 - 29 EOO		10.1	13 - 76 EOO
9.7	17 - 73 EOO		10.2	11 - 45 EOO