

Math 220, Basic Mathematics

Shasta College, Fall 2012, Section F1624

Course: Math 220, Basic Mathematics
MWF, 11 to 11:50 am
Room 2116
3 Credit Hours
Instructor: Thomas Glass
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Office Hours: TTh: 9 to 10 am
MWF: 10:00 to 11:00 am

1. **Catalog Description.** A course covering the basic skills of addition, subtraction, multiplication and division of whole numbers, fractions, and decimals, with word problem applications. Subjects also taught include prime numbers, order of operations, ratios, and proportions.

(a) Pre-requisite: none.

(b) Advisory: A grade of C or higher in ENGL 260, or English Placement Level 3 or higher

2. **Course Objectives.**

Upon successful completion of this course, the student should be able to:

(a) Demonstrate a tested mastery of the following arithmetic skills:

- i. Reading and writing of whole numbers, fractions, mixed numbers, and decimals
- ii. Adding, subtracting, multiplying, and dividing of whole numbers, fractions, mixed numbers, and decimals
- iii. Rounding whole numbers and decimals and estimating the results of calculations
- iv. Comparing the sizes of numbers, especially fraction to fraction, and decimal to decimal
- v. Converting among fraction, decimal, and mixed number
- vi. Using order of operations to perform multi step calculations
- vii. Writing ratios and rates and solving proportion problems
- viii. Converting among fraction, decimal, and percent (as time permits)
- ix. Solving application problems involving whole numbers, fractions, mixed numbers, and decimals. Problems will require using addition, subtraction, multiplication, and division, solving proportions, and if time permits using percents. Some problems will be multi step.

(b) Demonstrate a level of competency in reading technical material.

3. **Student Learning Outcomes.** Upon successful completion of the course, a student should be able to accurately apply steps of problem solving to solve a problem as follows:

- (a) Demonstrate understanding of the problem.
- (b) Choose an appropriate problem-solving strategy.
- (c) Effectively solve the problem using the chosen strategy.
- (d) Clearly state the correct solution to the problem.

Example. Sophie Germain and her brother are saving for a new TV. Each week Sophie is able to save \$24.75 and her brother is able to save \$28.50. After saving for 6 weeks, how much will they have saved? If the TV they want costs \$599, how much more will they need to save?

4. Assigned and Recommended Text and Materials.

- (a) **Required Text.** “*Basic College Mathematics, 4th Edition*” by Marin-Gay, Elayn, ISBN-13: 978-0321649409.
- (b) **Required Materials.**
 - i. The “Required Text”.
 - ii. Paper, pencil, eraser and notebook. I would suggest a 3-ring binder, but the choice is yours.
 - iii. www.SumOfCubes.weebly.com
 - iv. The Math Lab, located in the 700 Building has a reserve copy and solutions manual available.

5. Statement of Instructional Methods.

- (a) **Success.** Come to class ready to participate, take notes, and ask questions. Each class period will begin with an open session to review homework. This is your chance to ask questions regarding the assigned homework.

Be prepared for class by bringing all required materials and having completed or at least attempted homework assigned in the last class.

Find a study partner. You will find that the more you talk, write and see math, the better and easier it is to learn and remember.

If there is one piece of advice that works best, it is: “Repetition is the mother of all learning.” The more you see strategies to solve and utilize what you have learned, the easier the next concept becomes. I will show you how to solve and work in the math environment, and it may appear easy. But, at some point you need to do it on your own, without my guidance, to really “own” the concept.

Office hours are for the student, not the professor. Office hours are your time to ask me questions. If you are struggling with homework or something we did in lecture and you have a question, please come ask. Sometimes a little one-on-one help is all you need. My office hours are on the top of the first page, but if I’m in the office, and the door is open, you are welcome.

Shasta College staffs a full-time **Math Business Learning Center**. It is a place to get free math tutoring. It is staffed with helpful math tutors who like to talk math and are there to assist you. Put them to work and keep them busy. In addition to the tutors are videotapes, software, and solutions manuals. The Math lab is open **Monday-Friday**.

- (b) **Note.** This syllabus is subject to change by the instructor. Any changes will be announced in class and are the responsibility of the student.

6. Course Content.

(a) WHOLE NUMBERS

- i. Reading and writing
- ii. Adding, subtracting, multiplying, and dividing
- iii. Rounding and estimating
- iv. Application problems
- v. Order of operations

(b) FRACTIONS

- i. The meaning of a fraction; writing fractions
- ii. Prime numbers; factoring
- iii. Divisibility tests
- iv. Reducing
- v. Adding, subtracting, multiplying, and dividing
- vi. Application problems
- vii. Order of operations

(c) MIXED NUMBERS

- i. Converting between improper fraction and mixed number
- ii. Adding, subtracting, multiplying, and dividing
- iii. Application problems
- iv. Order of operations

(d) DECIMALS

- i. Reading and writing
- ii. Adding, subtracting, multiplying, and dividing
- iii. Rounding and estimating
- iv. Converting between fraction or mixed number and decimal
- v. Application problems
- vi. Order of operations

(e) RATIO and PROPORTION

- i. Writing ratios and rates
- ii. Solving proportion number problems
- iii. Applications

7. Grading Policies.

- (a) **Exams.** There will be 4 exams and a final exam. Exam dates will be announced in class at least one class prior to the exam. Exams will comprise both written and multiple choice questions. Your lowest exam score will be dropped in determining your class grade. If you must miss a class for any reason, and your absence causes you to miss an exam, that is the exam you drop. *There are no make-up exams.*
- (b) **Final Exam.** The final exam is mandatory and is not dropped in calculating your grade. The final exam will only be administered on Wednesday, December 19st from 8:00 am to 10:00 am.

- (c) **Grading.** Grades will be posted online. You may view your grades at any time via SumOfCubes.com or via GradeSource.com. You will need a secret code to discern which grade is yours. If you would like to utilize this resource, make sure I have your correct email address.

Exams (drop the lowest)	75%
Final Exam	25%
<i>Total</i>	100%

Grade Scale	
90% ≤	A
80% ≤	B < 90
70% ≤	C < 80
60% ≤	D < 70
	F < 60

8. Classroom Policies.

- (a) **Electronic Devices.** This is a cell phone free class. All cell phones, blackberries, pagers, iPods, iPads, etc are to be turned off or silent. Students found using such devices during class will receive a zero on the next exam.
- (b) **Email.** Much of an education is the ability to clearly communicate and express ideas; thus, if you choose to communicate with me via email, it must be done using proper English grammar. I will not respond to any emails that are not properly composed.
- (c) **In Class Communication.** If you have a question, please raise your hand and ask. Do not converse with your neighbor during class unless instructed. Disruptive behavior is not appreciated. You will be asked to leave the classroom for the remainder of the class.
- (d) **Guests and Children.** Only authorized persons are allowed in the classrooms. College liability coverage does not extend to guests or children and thus they are not allowed in the classroom. If a student needs assistance with childcare during class time, please contact the EOPS office. EOPS may be able to help with long-term day care; however, it does not provide day-care service on a drop-in basis.

9. College Policies.

- (a) **Academic Honesty:** According to the Shasta College Student Handbook and the Shasta College Catalog, there are a number of unauthorized behaviors that violate the campus academic honesty policy. Each student should become familiar with the policy. Failure to acknowledge the work of other scholars constitutes an egregious breach of ethics and is a violation of civil law. You must, in all cases, do your own work, acknowledge sources, and document them appropriately. Otherwise, disciplinary sanctions will be applied. If you have any questions about plagiarism, please do not hesitate to contact me. In other words, cheating of any sort will not be tolerated and will result in an F for the assignment, quiz, or exam, and the case may be reported to the Dean of Students.
- (b) **Student Conduct and Discipline:** In accordance with the Student Code of Conduct (Board Policy 5500), students are expected to obey all California State laws and all Federal laws that pertain to behavior on a college campus. Shasta Colleges jurisdiction and discipline shall be limited to conduct that occurs on Shasta College premises or that is related to school activities. Any student found to have committed misconduct is subject to the disciplinary sanctions outlined in Board Policy, Section 5520.

- (c) Dropping: If a student misses two consecutive weeks of class or more it may be assumed they are no longer interested in the course. School policy notes that these students may be dropped by the instructor either on census day or via the instructor initiated drop process. Nevertheless, if the student decides to stop attending, it is always the students responsibility to officially drop or withdraw from the class.
 - (d) Academic accommodations imposed by a disability: If you feel that you will need academic accommodations in this class due to limits imposed by a disability then contact the office of Disabled Students Programs and Services (DSPS) (242-7790) to make the necessary arrangements. It is the student's responsibility to provide documentation that verifies the disability and the type of limitations that may result. The DSPS office has been delegated the authority to, 1) evaluate that documentation and determine if it is sufficient to justify accommodations, 2) determine which accommodations are appropriate, and 3) facilitate the provision of approved accommodations.
10. **Tentative Schedule.** This class will progress through the book, beginning with Chapter One. Over the course of the semester, we should cover the first five chapters. There will be a test at the end of chapter one, two and three. The fourth exam will cover chapters four and five. Exam dates will be announced in class at least one class prior to the exam.

Please note that this is a tentative schedule and is subject to change by the instructor. Changes will be announced in class are the the responsibility of the student to be abreast of such changes.