UNIVERSITY of HAWAI'I®
WINDWARD
COMMUNITY COLLEGE

MATH 82 – Algebraic Foundations

4 Credits, CRN: 64049
Asynchronous Online; 1/09 – 5/12

INSTRUCTOR: David William K.W.L. DONLIN, Lecturer, Mathematics

OFFICE: https://meet.google.com/htq-fyix-ysk

This will be where you will meet with me during office hours.

(link can also be found in our Google Classroom)

OFFICE HOURS: To be determined or by appointment

EMAIL: donlind@hawaii.edu

EFFECTIVE DATE: Spring 2023

WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai'i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide the Ko'olau region of O'ahu and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.

CATALOG DESCRIPTION

This course covers elementary algebra topics. Topics include linear equations and inequalities, graphing, linear systems, properties of exponents, operations on polynomials, factoring, rational and radical expressions and equations, quadratic equations, and applications.

Prerequisite(s): Satisfactory Placement, or a Grade of "C" or better in Math 21, Math 21B, Math 24, Math 28, or Math 75X.

STUDENT LEARNING OUTCOMES

As a result of taking this course, students can expect to attain the following outcomes:

1. Use algebraic techniques to analyze and solve applied problems
2. Graph linear and quadratic equations
3. Solve equations, inequalities, and systems
4. Utilize precise mathematical language and symbols to effectively communicate mathematics in written and/or oral form

COURSE TASKS

The student will demonstrate competency in the objectives by participating in and completing all class activities, by completing and turning in all assignments as requested, by taking weekly quizzes, and by taking a final exam over concepts and skill covered in the entire course.

It is the **student's responsibility** to obtain and complete all assignments that are given in any class meeting for which the student is unable to attend. Unless permission is granted by the instructor beforehand, assignments and tests must be completed and submitted to the instructor at the specified date and time.

Calculators

Calculators are not allowed on quizzes and exams. A calculator may be used on homework as needed.

Quizzes & Final Exam

There are no retests or make-ups for quizzes. The final exam is cumulative. If you are unable to complete the weekly quizzes during the allotted window of opportunity, it may be possible to arrange a different time, but you must contact the instructor ahead of time to arrange this.

* A minimum of 60% is required on the Final Exam. Unless this minimum is met, grades of A, B, C, D, or CR cannot be assigned. In other words, if a student does not meet the criteria above, they must obtain the F grade for the course, unless they are qualified for an N or NC grade. If you do score less than 60% on the Final Exam **and** a minimum score of 60% will allow you to pass the course, then you are allowed to retest. Arrangements must be made with the instructor to review in preparation for a retest.

Homework

Homework will be completed online via the MyLab Math program. Keep in mind that homework is not simply a task to be completed but an opportunity to practice at your own pace. You may need to do more than the assigned homework problems to become comfortable with the concepts and skills; you may have to repeat problems to make sure you understand.

ASSESSMENT TASKS AND GRADING

Grading

To receive full credit for problems done on quizzes and exams, you must show sufficient work in a clear and organized manner to display your understanding of the content. Messy and/or disorganized work will not receive full credit.

Points will be assigned to each graded assignment, class activity, and tests as follows:

Weekly Quizzes	60%
Final Exam	20%
MyLab Math	20%
Total	100%

Course Grade

A letter grade for the course will be assigned according to the level of achievement as provided in the table below:

Grade	Definition
A	90% – 100% of the cumulative points possible
B	80% – 89% of the cumulative points possible
C	70% – 79% of the cumulative points possible
D	60% – 69% of the cumulative points possible
F	less than 60% of the cumulative points possible.
N	definition listed below
Cr	70% – 100% of the cumulative points possible
NC	less than 70% of the cumulative points possible

Note: CR/NC grades require written instructor consent. Students must apply for CR/NC grading option at the Admissions Office by the posted deadline. If a student does not apply for CR/NC grading option at the Admissions Office by the required deadline and if s/he does not withdraw, a letter grade (A, B, C, D, F, N) will be assigned for the course.

Note: The W grade is given only when the student officially withdraws from the course by the posted deadline. If a student withdraws from this course they must also withdraw from the companion Math 88 course.

Note: *The I grade is a temporary grade given at the instructor's option when a student has failed to complete a small part of a course because of circumstances beyond his or her control.* A student may qualify for the "I" grade if: (a) they are unable to take the final exam and (b) taking the final exam could possibly raise their course grade. The "I" grade is given by student request and must be approved by the instructor.

Note: The N grade is given at the discretion of the instructor and only when the criteria for the N grade is met by the student. Consult the WCC Catalog for the criteria of the N grade.

Note: Students must apply for the Cr/NC grading option at the Admissions Office. Consult the WCC Catalog for deadlines.

Note: W grade is given only when the student officially withdraws from the course at the Admissions Office. Consult the WCC Catalog for deadlines.

LEARNING RESOURCES

Laulima:

- "Algebraic Foundations" tab when logged into Laulima

Pearson – MyLab Math:

- Pearson can be accessed through the link on the Laulima page for this class.

Google Classroom:

- Access through your UH Gmail account with Class Code: ekz3tbu

Learning Resources

- Textbook: *Lial, Hornsby, McGinnis. (2020) Algebra For College Students, 9th Edition*
  - Access to Pearson, MyLab Math will provide you with a digital version of the textbook. The physical textbook is not necessary for this class.
- TRiO: http://windward.hawaii.edu/TRIO/index.php
- Khan Academy Videos: http://www.khanacademy.org
- Tutor.com: https://windward.hawaii.edu/tutor.com/
- OLA (UH online tutoring program): http://manoa.hawaii.edu/ola/
- Desmos online graphing calculator: https://www.desmos.com/calculator
- Google Search – but go to "Images" then "Videos", reading is dumb

Ka Piko Services provides FREE academic and technical support to all WCC students. Our services are available both in-person and virtually (via Zoom). Our goals are to help students succeed academically and to become independent lifelong learners. We are staffed by friendly and knowledgeable peers who are ready to assist you!

- **Ka Piko Math Lab** provides assistance for all math courses offered at WCC, helping to improve students' understanding of important concepts and problem-solving processes.
- **Ka Piko Writing Lab** provides assistance with any and all aspects of the writing process, including: brainstorming, research, MLA formatting and citations, drafting, and revising.
- **Ka Piko Student Tech. Support** can assist students with Google@UH, Laulima, MyUH, UH accounts, and can provide best-effort support for problems or questions with personal computers and other smart devices.
- Ka Piko also provides free weekly **Success Connection Workshops** for students

Visit the Ka Piko webpage at go.hawaii.edu/A42 for more information about our services, to learn how to connect with our tutors and tech assistants, or to RSVP for a Success Connection Workshop. Contact the Ka Piko Coordinator, Scott Sutherland, at scottjks@hawaii.edu if you have any questions.

DISABILITIES ACCOMMODATIONS

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Accessibility Counselor to discuss reasonable accommodations that will help you succeed in this class. Roy Inouye can be reached at (808) 235-7448, royinouy@hawaii.edu, or you may stop by Hale Kākoʻo 106 for more information.

SEX DISCRIMINATION AND GENDER-BASED VIOLENCE RESOURCES (TITLE IX)

Windward Community College is committed to providing a learning, working, and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking.

If you or someone you know is experiencing any of these, WCC has staff and resources to support and assist you. To report an incident of sex discrimination or gender-based violence, as well as receive information and support, please contact one of the following:

Karen Cho
Deputy Title IX Coordinator
Phone: 808-235-7404
Email: kcho@hawaii.edu

Desrae Kahale *Confidential Resource*
Phone: 808-235-7393
Email: dkahale3@hawaii.edu

Jojo Miller, *Confidential Campus Advocate*
Phone: 808-348-0663
Email: jojo.miller@hawaii.edu

Leslie Cabingabang *Senior Confidential Advocate*
Phone: 808-348-0432
Email: leslie.cabingabang@hawaii.edu

As a member of the University faculty, I am required to immediately report any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and I cannot guarantee confidentiality, you will still have options about how your case will be handled. My goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need.

For more information regarding sex discrimination and gender-based violence, the University's Title IX resources and the University's Policy, Interim EP 1.204, go to manoa.hawaii.edu/titleix/

ACADEMIC INTEGRITY

Work submitted by a student must be the student's own work. In this class, students who commit academic dishonesty, cheating or plagiarism will have the following consequence(s):

Students will receive a failing grade for plagiarized assignments.

All cases of academic dishonesty are referred to the Vice Chancellor for Student Affairs.

Academic Honesty

All exams must be done by your own individual effort. You may not consult with any classmates while taking exams. This would fall under the guidelines of academic integrity and any evidence of cheating will result in a score of 0 for all parties involved. An "F" will be assigned to students involved in cheating and will be reported to the Dean. See http://windward.hawaii.edu/Policies/ for more information on the UH system-wide student conduct code.

ALTERNATE CONTACT INFORMATION

If you are unable to contact the instructor, have questions that your instructor cannot answer, or for any other issues, please contact the Academic Affairs Office:

- Location: Alakaʻi 121
- Phone: (808) 235-7422

COURSE CONTENT

DONLIN – Spring 2023 (CRN: 64049)
Academic Calendar: https://windward.hawaii.edu/campus-life/events-calendar/academic-calendar/
January 8 – Last Day of Regular Registration
January 17 – Last Day to Add/Late Register, Last Day for 100% Refund
February 1 – Last Day for 50% Refund, Last Day to Withdraw *without* a "W" Grade
March 24 – Last Day to Establish C/NC and Audit Options, Last Day to Withdraw *with* a "W"
April 3 – First Day of Registration, Spring 2023
May 3 – Last Day of Instruction
May 12 – Last Day of the Semester
Holidays for the Semester
January 16 – Dr. Martin Luther King Jr. Day
February 20 – Presidents' Day
March 13-17 – Spring Break
March 27 – Prince Jonah Kuhio Kalaniana'ole Day
April 7 – Good Friday

*Note that the schedule below is subject to change. Students will be notified of any changes.

For each given week you will be responsible for completing homework assignments on Pearson along with a quiz for that week which will contain content from the sections covered over that week. The Final Exam will be cumulative and cover content from all sections.

Week Number	Sections Covered
Week 1 **1/9 – 1/13**	Syllabus 1.1
Week 2 **1/16 – 1/21**	1.2, 1.3, 1.4
Week 3 **1/23 – 1/27**	1.5, 2.1
Week 4 **1/30 – 2/3**	2.2, 2.3
Week 5 **2/6 – 2/10**	2.4, 2.5

Week 6 **2/13 – 2/17**	2.6, 3.1
Week 7 **2/20 – 2/24**	3.3, 4.1
Week 8 **2/27 – 3/3**	4.2, 4.3, 4.5
Week 9 **3/6 – 3/10**	4.6, 5.1, 5.2
Week 10 **3/13 – 3/17**	Spring Break
Week 11 **3/20 – 3/24**	5.3, 5.5, 6.1
Week 12 **3/27 – 3/31**	6.2, 6.3, 6.4
Week 13 **4/3 – 4/7**	6.5, 7.1
Week 14 **4/10 – 4/14**	7.2, 7.3, 7.4
Week 15 **4/17 – 4/21**	7.5, 7.6
Week 16 **4/24 – 4/28**	8.1, 8.2, 8.4
Week 17 **5/1 – 5/5**	9.3
Week 18 **5/8 – 5/12**	Final Exam

ADVICE FROM FORMER STUDENTS

At the end of every semester I ask my students the following question: What advice would you give to a student taking this course next semester? Below are their collected response from the past few years.

- Be prepared to do a lot of work.
- Be prepared to manage your time.
- Just do your part and keep doing your homework.
- Do the Pearson homework. Without the practice to solidify what you've learned, you will not do well in this class.
- You should spend extra time trying to do practice problems to learn how to do this math.
- Complete all the homework. Take your time, get help!
- Don't slack off it's hard to catch up. Keep up with the assignments, there are a lot of them so if you miss any it takes a long time to catch up.
- Ask questions.
- Don't be afraid to ask questions.
- Don't be afraid to ask stupid questions, they aren't stupid questions if they help you learn.
- Ask the stupid questions!
- Do the homework, you're going to need it on your tests.
- Do the homework to get the best preparation for the tests and understand the concepts.
- Pace yourself with the homework.
- Stay caught up with the homework.
- Do the fricken homework, or else you won't be ready for the test!
- Stay on track with the syllabus and complete what is due every week.
- Do not procrastinate and stay caught up on the homework, because once you're behind it's really hard to catch back up.
- Stay on a rigorous schedule and keep up with assignments. I would also advise that you seek out a tutor before the semester begins and to go over notes with a tutor weekly. Ask for assistance, keep the instructor in the loop, and keep an open line of communication.
- Don't take this course lightly! Make this your priority! GET YOUR TUTOR ASAP! Go to TRIO go to the math lab! Mr. Donlin is super accommodating and easy to work with BUT YOU STILL HAVE TO KNOW THE CONTENT! If you think you gonna just half @$$ it DON'T BOTHER WASTING YOUR TIME OR MONEY/SCHOLARSHIP!!! Be ready to put in work!!!

FINAL WORDS FROM THE INSTRUCTOR

"I didn't get there by wishing for it or hoping for it, but by working for it."

– Estée Lauder

Math is a difficult subject for many people because of the way the content stacks upon itself. For example, I cannot raise a number to a given exponent if I don't know how to multiply, I cannot multiply numbers if I don't know how to add them, and I cannot add if I don't know how to count. Every skill in math sits on a step, below that step are all the stairs of things previously learned to reach that step while above that step are the things yet to learn. Unfortunately, just like in real life, walking the stairs kinda sucks; most people would rather ride the escalator or risk the germs incubating in the elevator or, if you're like me, it would be awesome if there were someone there to just wheel you around while you sat in a comfy chair. But again, just like in real life, you'll be forced to take the stairs because machines break down and as my mother tells me, "no one is pushing your lazy ass around." Mother's love aside, I previously mentioned that math is a learned skill and as a learned skill it has much in common with playing just about any sport. Take the "Big Game" for example. How does one prepare for this event? I would assume that there would be weeks, if not months, of conditioning, training, and strategizing to maximize performance and provide the best opportunity to "take the win" as the saying goes (I'm assuming all this because I've never played "the sports" myself, I was an indoor recess kind of kid). So tying this back to math, students in a math class can expect to practice their math skills outside of class, i.e. homework. Unfortunately, the term "homework" comes with a number of negative connotations learned from way back in grade school when a task was assigned by the teacher and your primary goal was to complete such a task so you could be done with it all because you felt that you had better things to do with your time. Learning does not simply materialize from completing one task after another; rather the labor of the task is meant to hone your senses in a particular fashion and makes you stronger for having done the work. You have chosen an academic path that will push you to determine what it means for you to be successful. You need to determine how much time to put into your course work, honestly figure out when you need to practice more or have had enough, and, most importantly, when to reach out for help. Thus, onto the scene, enters me, your instructor. Consider me to be the Yoda to your Luke Skywalker or the Mr. Miyagi to your Daniel-san. During class there is a great deal of content to cover and I can help set you up and show you the basics of how to approach each problem, but your understanding will be developed and solidified as you practice on your own, exercise your force powers, wax-on/wax-off, take the stairs if you will. I believe that just about anyone can learn the math I teach, but I also recognize the struggle of learning everything in only 15 weeks while also balancing work, family, and all manner of other responsibilities; this is the truly challenging part for most students. However, walking away with a win doesn't always come easy, just ask Luke Skywalker and Daniel-san, you can find them taking the stairs.

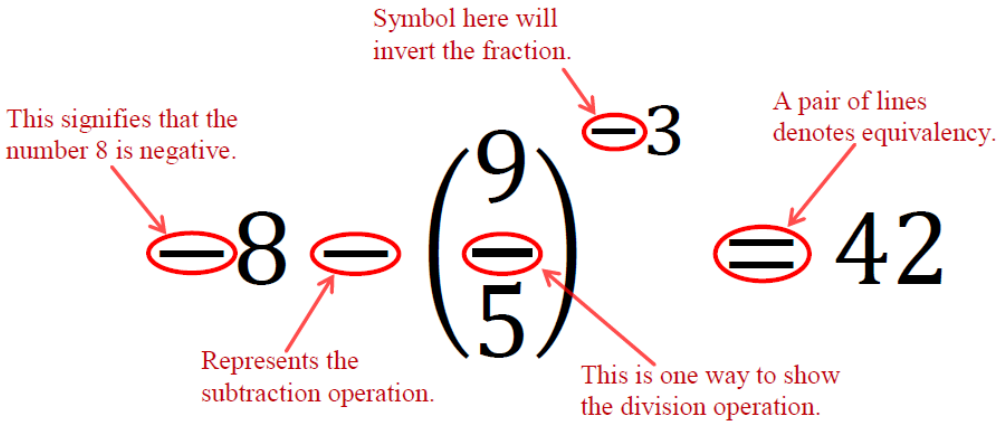
For my first wax on/wax off moment, I want you to keep two things in mind, as far as math is concerned, that are illustrated in the pictures below and on the following page:

1. The language and symbology of mathematics is exact. This is not an art class, and the positioning of numbers, letters, and the lines between them all have a purpose.
2. Much of the solution to a math problem is implied by the smallest of details and it will be up to you to bring the knowledge needed to solve these problems. This is very much unlike, for instance, an essay question, where you can sometimes extract part of your answer from the question or the way it is framed.

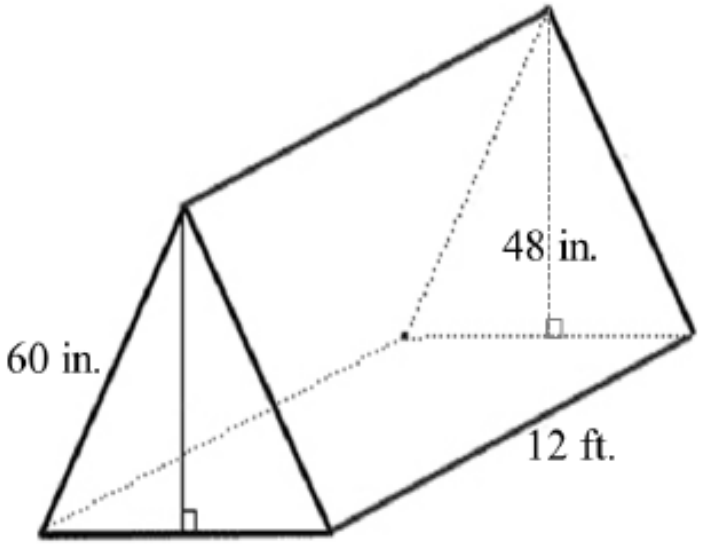
“ _ ”

What does this symbol represent?

$$-8-\left(\frac{9}{5}\right)^{-3}=42$$



How do you solve the following problem?



Find the Volume of the Prism.

$V = Bh$

There is a Right Triangle here and Pythagorean Theorem can be applied.
Leg 1 = 48 in.
Leg 2 = unknown
Hypotenuse = 60 in.

Height of the Triangle, but not Height of the Prism.

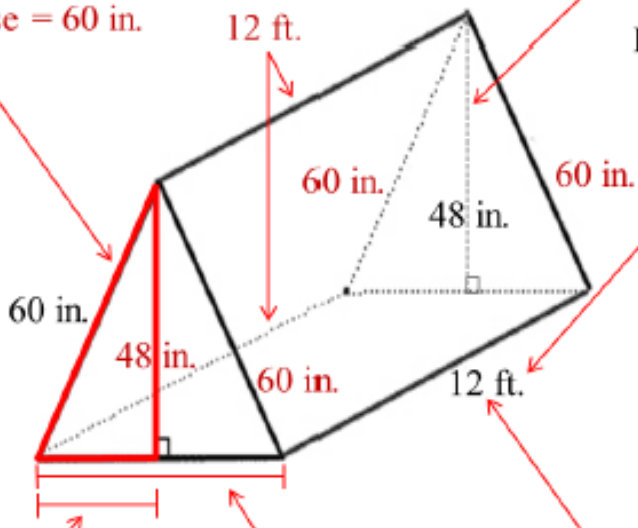
Prism is a Triangular Prism and the Base of the Prism is a Triangle.

Find the Volume of the Prism.

h = Height of the Prism (this is different from the Height of the Triangle)

$V = Bh$

B = the Area of the Base (The Base is a Triangle, so the Area Formula for a Triangle is needed: $A = \frac{bh}{2}$ where 'b' is the Base of the Triangle and 'h' is the Height of the Triangle.)



This is the Length of the Base of the Triangle and is needed to calculate the Area of the Base of the Prism.

Units here are in 'feet' but other measurements are in 'inches'. All measurements need to be converted to the same Units of Measure, either feet or inches.

Pythagorean Theorem ($a^2 + b^2 = c^2$, solve for 'a' or 'b') must be used to find this length, then multiply that value by 2 in order to find the Length of the Base of the Triangle.