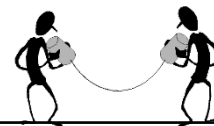


Welcome to MA 15300 College Algebra Online

Fall 2022 for 8 Weeks

Instructor: John LaMaster
Preferred Pronouns: He, him, his
Office: Kettler 264



How to Reach Me: E-mail: lamaster@pfw.edu ← preferred
Please use the following protocol when e-mailing me →
Google Voice: 260-267-0486
Office/voice mail: 260-481-5430
Math Dept: 260-481-6821
I normally respond within 24 hours (often sooner)
except on holidays and weekends.

- To make sure your email reaches me, include in the subject line your full name and course. For example: **Peter Parker, MA 153 Online**
- University policy requires that you use your university e-mail address to email me to protect your privacy. Please do not use your private email address.
- Please keep the topic about the class.

Office Hours: MW 11:00-11:50 in KT 218 Face to Face or through Zoom. Sometimes, I stay longer if students want my help longer, but since there is another class in there at 1:30 PM, I have to leave by 1:25.

Prerequisites: MA 111 with B- or higher or placement by departmental exam. This course is primarily intended for students who have completed at least two years of high school algebra

Course Website: Go to purdue.brightspace.com to access our course. Click on **Purdue Fort Wayne**, enter your PFW username and password, and click **Log in**. The suggested browsers are Chrome and Firefox. Please watch the [course tour](#). Explore and become familiar with the content and resources available in Brightspace.

Course Structure: Videos on Brightspace are best watched with pencil and paper in hand so you can work along with the class on the video. **Interactive Videos** are part of the course grade and require a response from you to proceed. Assignments, quizzes, and tests are completed using e-Homework (commercially called Möbius).



TIP: Keep a special section in your notes or a binder to collect any questions as you watch the videos and work on e-Homework.

You will also connect with other students in the class through our online asynchronous discussion forum.

Materials: In addition to notebook plus binder for organizing your notes, please see these three items.

1. **e-Homework**, commercially called Möbius, is required for all your graded homework, which has automatically been linked to your Brightspace course so you are already registered and can access Möbius from day one of the course. Good news! The cost of Möbius (\$20.00 per year) is a fraction of the price of what you would pay for My Math Lab (\$80 per semester) and Möbius has more features to help you learn. The \$20.00 license fee has been added to your tuition statement by the Follett's Bookstore. If you have already purchased a license for Möbius less than a year ago, you can opt out of the automatic purchase. (Check your university email from Follett's for information.)



IMPORTANT! Always enter Möbius through Brightspace! Otherwise the marriage between Möbius and Brightspace will separate and they will stop communicating with each other.

2. A **graphing calculator** is required for activities, assignments, quizzes and tests. The **TI-84 Plus** or **TI-84 CE Plus** are the *tools of choice*.
Note: You can rent one at Walb Student Union 225 (260-481-6586).
Click [HERE](#) for more information.



Yo! Optional!



Since all quizzes and tests are online, these free alternatives are also possible: [Wabbit Emu](#)
[Desmos](#)
[Geogebra](#)

If you know of other free options, please share this info with me.

3. The **text** *Functions Modeling Change, 6th Edition* by Connally, et al. is **optional** but recommended. Some students have shared they did fine without a text and learned everything from doing eHW.



TIP: You can also use the 5th Edition or even the 3rd. We do **NOT** use WileyPLUS. You might find it for cheap online at [Chegg](#), [Amazon](#), [eBay](#), [betterworldbooks.com](#), and from [Wiley](#).

Recommended exercises out of the text will be given to deepen your understanding, but not required.

Objectives and Content: The purpose of this course is to prepare you for calculus. (If you do not intend to take calculus, a better course to take would be either MA 140 or STAT 125. They have higher success rates.) In this course you will solve problems presented as real-world situations by creating and interpreting mathematical models which include linear, exponential, quadratic, power, polynomial and rational functions. Solutions to the problems are formulated, validated, and analyzed using mental, paper and pencil, algebraic, and technology-based techniques as appropriate. MA 15300 meets all [eight outcomes](#) (3.1 to 3.8) in *Area 2: Quantitative Reasoning* of the Indiana General Education Core. We will cover portions of Chapters 1-6 and Chapter 11 of the text.

Grading:

Prerequisite Skills Quiz.....	25 pts.	(2.8%)
Participation: Community Building...	10 pts.	(1%)
Participation: Interactive Videos...	115 pts.	(13%)
e-HW Assignments.....	100 pts.	(11.1%)
Top 4 Quizzes @ 25 pts each	100 pts.	(11.1%)
Test 1	100 pts.	(11.1%)
Test 2	100 pts.	(11.1%)
Test 3	100 pts.	(11.1%)
Comprehensive Final Exam	250 pts.	(27.8%)
Total Points Possible	900 pts.	

Grading Scale:

90% -100% (810 pts. or more)	A
80% - 89% (720 to 809 pts.)	B
70% -79% (630 to 719 pts.)	C
60% - 69% (540 to 629 pts.)	D
<60% (Below 540 pts.)	F

Prerequisite Skills Quiz: This quiz provides quick and early feedback to you on your proficiency with the skills needed for this course so you know if you have the skills needed, if you need to brush up, or if you need to take a refresher course. Study the eHW assignment *Math Background Needed for MA 15300* (and its worked out solutions). There are *eHW Flash Cards* to practice as well as free Khan Academy resources [HERE](#).

Participation - Community Building: Post your self-introduction on Brightspace and submit the *Getting to Know You* survey, each worth 5 points. Some ways to earn +1 Rhino bonus toward your participation score: attach a photo to your self-introduction on Brightspace or post substantively to the **Piazza Discussion Board** (ask a question, answer another student’s question, or positively contribute to the class community by sharing a tip.) You can also earn +1 Rhino bonus getting caught being awesome.

Participation – Interactive Videos: Interactive Videos (found in the Weekly modules in Brightspace) require you to enter a response for the video to proceed. These responses are graded, but you can redo them as many times as you want and you keep the highest score. The average is scaled to 115 points, thus an average of 100% is a score of 115 out of 115. If your average score is only 90%, your score would be 103.5 out of 115, and so on.

e-HW Assignments: Past students cite eHW as the key to their success You have unlimited attempts until the due date and the highest score is taken. The average score of all your best eHW scores (@ 20 pts each) is converted to a percentage and taken out of 100 points. Please read the section on eHW in the *General Course Information* for help with how to use *eHW*. You are encouraged to complete the assignment **multiple times** (even after you have earned a perfect score).

Research shows that students who do this retain the material better for the test.



TIP: You have **unlimited attempts** until the due date and the highest score is taken. The average score of all your best eHW scores is converted to a percentage and taken out of 100 points.

- **Late eHW** may be submitted for some partial credit, but certain conditions apply: for each perfect score you earn before the due date in the *Assignments (for a Grade)* area, you may redo one past due assignment at a 10% late penalty, i.e. for late eHW, a score of 20 would be entered in the Brightspace grade book as a score of 18. Go to the tab in Möbius called *Rhino Opportunity for Late Assignments* to access these after the due date.
- **eHW Guarantee:** The question bank is well scrubbed; however, if you do find that your answer is correct and the system tells you otherwise (due to mathematics, not text entry) and you are the first to report it to me, lamaster@pfw.edu, I will gratefully award you double points for that question.



Quizzes: To help make quizzes a learning experience, you can **drop all but the top four quizzes** (except the prerequisite quiz, which can not be dropped). All quizzes are online through Möbius. Quizzes serve as “dress rehearsals” for the tests, so high performing students find they are worth their best effort even after earning four high scores. Since I take only the sum of the top four quizzes, there are no make-up quizzes.



TIP: See also the *Rhino Quiz Awards* on the last page to earn bonus points.

Tests: All tests are online through Möbius. Keep track of these dates in your personal calendar:

Test 1 (*Tentatively Sections 1.1-1.5, 2.1, 2.2, 2.5*): Tues., Nov. 5 - Sun., Nov. 10


Test 2 (*Tentatively Sections 4.1-4.5, 5.1-5.3*): Tues., Nov. 19 - Sun., Nov. 24

Test 3 (*Tentatively Sections 2.4, 6.1-6.2, 3.1-3.2, 11.1-11.3*): Tues. Dec. 3 - Sun., Dec. 8

Comprehensive Final Exam (*Tentatively Section 11.4-11.5 and all prior content*): Mon., Dec. 16 - Sat., Dec. 21



Student Support: I want you to be successful. Please reach out if you need help. Below is a directory of resources for specific issues. If technical difficulties affect your ability to complete assignments, please notify me as soon as possible.

For help with:	Contact:	Contact Information:
General Needs	Academic Services, Technology Services, Health and Wellness, and Support from Administrative Offices	See the Student Support Services Website
PFW account/password/ Brightspace Support	Information & Technology Services (ITS) Help Desk	Call: 260-481-6030 Email: helpdesk@pfw.edu See the ITS Website
Troubleshooting eHW	eHW Technical Support	Email: ehwtechsupport@pfw.edu
Graphing Calculator Rental	Student Government	Walb 225 or call: 260-481-6586 See the Calculator Rental Website
Using eHW (Möbius)	Check out the resource <i>General Course Information</i> in Brightspace first. Then see the Möbius Support Website for help.	
Tutoring	Online HERE and Face to Face tutoring in KT G19. I will put a schedule in Brightspace once it is available.	
Short-term Counseling (Free)	Campus Health Clinic	Call the 24 hour Hotline: 800-342-5653 See their Website .
Withdrawing from the class	Student Success & Transitions	Call: 260-481-0404, E-mail: withdraw@pfw.edu See the Student Success & Transitions Website .
How to succeed in MA 15300	Students enrolled in a previous MA 15300 semester	 See the tips they wrote specifically to you!
If you don't know where else to turn for resources, then contact the CARE team	See their Website or call: 260-481-6601
Accommodations for students with disabilities (See below*)	Disability Access Center (DAC)	Walb 113, 260-481-6658, See their Website .



***For Students with Disabilities**

If you have a disability and need assistance, special arrangements can be made to accommodate most needs. Contact the Director of the Disability Access Center (Walb Union, Room 113, telephone number 481-6658) as soon as possible to work out the details. Once the Director has provided you with a letter attesting to your needs for modification, bring the letter to me. For more information, please visit the [Web site for Disability Access Center](#) (DAC) and refer to the [DAC Student Handbook](#).

Rhino Success

I believe in your success and want to support you to meet your goals.

You can do it!

But it will require that you take charge of your learning, do the work required, and make the commitment to do what it takes to succeed.

If you want to succeed in life, be like the rhinoceros!

Wake up each morning and CHARGE straight ahead to accomplish your goals.

No obstacles get in the way of a 3 ton snorting rhinoceros charging at full speed!



Overall Course Schedule: The tentative course calendar on the next page provides more details about deadlines and may be helpful to see the big picture. The deadlines are also on the eHW (Möbius) Website and on the Brightspace Calendar and on this handy, clickable [Rhino Checklist](#). If for any reason you are unable to complete a test during the specified dates for reasons beyond your control, please reach out to me for help.

Overall Course Schedule





Schedule and assignments subject to change. Any changes will be posted in Brightspace

Topic	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Sat
Week 1 (Oct. 23-26): Sections 1.1-1.5 Linear Functions and the Average Rate of Change	Oct 20	Oct 21 Fall Break	Oct 22 Fall Break	Oct 23	Oct 24	Oct 25 Self-Introduction on Brightspace due Getting to Know You Survey due eHW on Math Background due Prerequisite Skills Quiz closes	Oct 26
Week 2 (Oct. 27-Nov. 2): Sections 2.1-2.6 Function Properties	Oct 27	Oct 28 eHW0: General Course Info due eHW Syllabus Scavenger Hunt & Course Tour eHW01: Chapter 1 due Quiz 1 closes	Oct 29	Oct 30	Oct 31	Nov 1	Nov 2
Week 3 (Nov. 3-9): Sections 4.1-4.5 Exponential Functions	Nov 3	Nov 4 eHW02: 2.1-2.2 due eHW03: 2.5-2.6 due Quiz 2 closes	Nov 5 T1 opens	Nov 6	Nov 7	Nov 8	Nov 9
Week 4 (Nov. 10-16): Sections 5.1-5.3 Logarithmic Functions	Nov 10 T1 closes	Nov 11 eHW04: 4.1-4.2 due eHW05: 4.3-4.5 due Quiz 3 closes	Nov 12	Nov 13	Nov 14	Nov 15	Nov 16
Week 5 (Nov. 17-23): 2.4,6.1-6.2, 3.1-3.2 Transformations of Functions (Reflections, Vertical Stretches, and Vertical Compressions) and Quadratic Functions	Nov 17	Nov 18 eHW06: 5.1 due eHW07: 5.2-5.3 due Quiz 4 closes	Nov 19 T2 opens	Nov 20	Nov 21	Nov 22	Nov 23
Week 6 (Nov. 24-30): Section 11.1-11.3 Power Functions and Polynomial Functions	Nov 24 T2 closes	Nov 25 eHW08: 2.4, 6.1, 6.2 due eHW09: 3.1-3.2 due Quiz 5 closes	Nov 26	Nov 27	Nov 28 Thanksgiving Break	Nov 29 Thanksgiving Break	Nov 30
Week 7 (Dec. 1-7): Section 11.4-11.5 Rational Functions	Dec 1	Dec 2 eHW10: 11.1 due eHW11: 11.2-11.3 due Quiz 6 closes	Dec 3 T3 opens	Dec 4	Dec 5	Dec 6	Dec 7
Week 8 (Dec. 8-14): Section 11.5 Formulas of Rational Functions	Dec 8 T3 closes	Dec 9 eHW12: 11.4 due Quiz 7 closes	Dec 10	Dec 11	Dec 12	Dec 13 eHW13: 11.5 due Quiz 8 closes	Dec 14
Final Exam Week (Dec. 15-21)	Dec 15 All late eHW closes	Dec 16 Final Exam opens	Dec 17	Dec 18	Dec 19	Dec 20	Dec 21 Final Exam closes

All eHW, quizzes, tests, and the final exam are completed through Möbius. **They close at 11:59 PM on the day indicated.**

- You have unlimited attempts to complete your eHW Assignments until the deadline.
- To help accommodate any possible Internet outages, you will have 3 attempts for each quiz and each test.** You have 90 minutes to complete each quiz, taking the highest score. You have 180 minutes to complete each test, taking the highest score. The longer time limit is so you can take it unrushed. Please contact me as soon as possible if you have any issues that prevent you from completing your work. I encourage you to reach out to me.

Rhino Awards and Badges:

- Rhino Hot e-Homework Assignment Award:**
For each eHW Assignment earned at 90% or above, you can redo one eHW at 10% late penalty. 
- Rhino Quiz Awards:** 
Earn a +2 Rhino Bonus on a test if you earn 90% or above (≥ 22.5) on each quiz over that test material, i.e., +2 on Test 1 if you earn 90% or above on Quiz 1 & 2; +2 on Test 2 if you earn 90% or above on Quiz 3 & 4; +2 on Test 3 if you earn 90% or above on Quiz 5 & 6; +2 on the Final if you earn 90% or above on Quiz 7 & 8.
- Rhino Syllabus Award:**
Earn a +1 Rhino Bonus on the eHW *Syllabus Scavenger Hunt & Course Tour* if it is a score of 100%. 
- Rhino Key Contributor Award:**
Earn a +1 Rhino Bonus to *Participation: Community Building* if you post at least once to the Piazza Discussion Board in a way that supports others' learning. 



You have reached (except for [this one more item](#) for those who choose) the end of this syllabus, and I am grateful that you took the time to read it. Thank you! I am looking forward to having an awesome semester together.

1. The Course Goals

Many students take this course because it is required for their degree. But there are better reasons than that!

In *College Algebra* (MA 15300) and *Trigonometry* (MA 15400) you will:

- Highlight the link of mathematics to the real world.
- Develop a wide base of mathematical knowledge, including
 - basic skills and concepts,
 - a functional view of mathematics, including graphical, algebraic, numerical, and contextual viewpoints,
 - properties and applications of some of the basic families of functions
 - geometric visualization,
 - problem solving, predicting, critical thinking, and generalizing.
- Incorporate the use of general academic skills such as
 - communicating mathematics concepts,
 - understanding and using technology, and
 - working collaboratively.

The above aligns with the foundational intellectual skills for quantitative reasoning in the [Indiana College Core](#) and is based on the guidelines of the Mathematical Association of America's subcommittee, [Curriculum Renewal Across the First Two Years](#) (CRAFTY).

2. General Education Course Learning Outcomes

College Algebra and Trigonometry addresses all eight outcomes in Area 3: Quantitative Reasoning of the Indiana College Core (listed below). Through hands-on activities and assessments you will

- create and interpret mathematical models to solve problems presented as real world situations,
- formulate, validate, and analyze solutions to problems using mental, paper and pencil, algebraic, and technology-based techniques as appropriate
- utilize graphing calculators to find the solution to problems which cannot be solved by pencil and paper, as well as explore mathematical patterns and visualize mathematical ideas,
- recognize and cite assumptions made in real world problem solving, and
- communicate your reasoning.

Indiana College Core Area 3 Quantitative Reasoning Competencies

Interpretation and Representation

3.1. Interpret information that has been presented in *mathematical form**

3.2. Represent information/data in *mathematical form** as appropriate

**mathematical form* = functions, equations, graphs, diagrams, tables, words, and geometric figures.

Mathematical Procedures

3.3. Demonstrate skill in carrying out mathematical (e.g. algebraic, geometric, logical, statistical) procedures flexibly, accurately, and efficiently to solve problems.

Critical Thinking

3.4. Analyze mathematical arguments, determining whether stated conclusions can be inferred.

Application / Analysis

3.5. Communicate which assumptions have been made in the solution process.

3.6. Analyze mathematical results in order to determine the reasonableness of the solution.

3.7. Cite the limitations of the process where applicable.

Communication

3.8. Clearly explain the representation, solution, and interpretation of the math problem.

Click [HERE](#) for more information about the Indiana College Core.

3. Study Time Outside of Class

This course requires a solid effort. During the Fall or Spring Semester, the faculty at PFW expect you to study a minimum of 6 hours a week outside of class working on mathematics for MA 15300 or MA 15400 and 10 ten hours per week for MA 15900. This pace is accelerated in the summer sessions.

4. Accessibility and Accommodations

If you have a disability and need assistance, special arrangements can be made to accommodate most needs. Contact the Director of Services for Students with Disabilities (SSD). They are located at Walb Student Union, Room 113, telephone (260)481-6658, as soon as possible to work out the details. Once the Director has provided you with a letter attesting to your needs for modification, bring the letter to your instructor. For more information, please visit the Web Site for SSD: pfw.edu/ssd/.

5. Prerequisite Skills

MA 15300, MA 15400, and MA 15900 are intended for students who have completed two years of high school algebra. The prerequisite for MA 15300 or MA 15900 is completion of Intermediate Algebra MA 11100 with a B- or higher or placement by departmental exam. The prerequisite for MA 15400 is MA 15300 with a C- or higher or placement by departmental exam. Look at the kinds of problems in the Math Background assignment on eHW. If they do not look familiar, perhaps you need to drop the class and take either the prerequisite Intermediate Algebra MA 11100. For those needing MA 15300, PFW does not offer a course lower than MA 11100.

6. Graphing Calculators

Graphing calculators are used for activities and assignments in and out of class. The TI-84 Plus or TI-84 Plus CE is strongly recommended. You may use another equivalent calculator* but you will be responsible for understanding how to use it. Your instructor will be most familiar with the TI-84 Plus or TI-84 Plus CE and may not be able to offer you help with other calculators.

*Your calculator should have features which enable you to find **intersection points, zeros (or roots), maximum/minimum points** of graphs, and explore functions numerically with **tables**. If you have questions whether your model of calculator is allowed, ask your instructor.

Graphing Calculator Loan Program: You can rent a TI-84 Plus for the semester for a nominal fee from the Purdue University Fort Wayne Students' Government Association, located in the Walb Student Union Room 225, Telephone 260-481-6586. Supplies are limited and are usually depleted the first week of classes. However, some students may have dropped a class which requires a calculator so one could just be sitting here on a shelf waiting just for you. More information is [HERE](#).

7. Computer and Internet Access

Student-access computer labs are located around campus. For a complete list, go to the Information Technology Services Website [HERE](#). To use the computers in these labs you must have an activated PFW computer Lab Account, which you received when you enrolled in PFW. For assistance contact the Help Desk at Kettler 206 or email helpdesk@pfw.edu. The Help Desk hours are listed on their Website [HERE](#).

Borrowing a Laptop or Desktop System: Information Technology Services (Call: 260-481-6030, Email: helpdesk@pfw.edu) has a limited number of laptops and desktop systems that may be loaned to students, faculty, and staff who have internet access available at home. The desktop systems do not have wireless capability, so they must be connected directly to your wireless router via a standard Ethernet cable. Additionally, Helmke Library (Call: 260-481-6505, e-mail: ref@pfw.edu) has a limited number of laptops that may be checked out by students.

8. Office Hours and Free Tutoring

- Instructors' **Office Hours** are open to students in any section. See Brightspace for the current semester schedule.
- **Face-to-Face tutoring** is available in Kettler Hall G19. Hours are posted on Brightspace.
- The **Piazza Discussion Boards** for MA 15300 and MA 15400 are at <https://piazza.com/pfw> and includes students from all sections of the course. You can post anonymously to the class if you wish. Students often answer other students' questions.

9. e-Homework (eHW)

Great news! The Web-based electronic homework system (also called Möbius) will immediately grade your answers and will provide worked-out solutions. It is only \$20 for an entire year's worth of access. You will use it for all of your graded homework.

Using eHW for LEARNING and not simply for EARNING


On the eHW home page is a one minute (silent) [video](#) showing the difference between using eHW for *earning* vs. *learning*.



(Footage edited from youtube.com/watch?v=7clAJJNsdmQ)

To make the most out of eHW,

- Try the assignments as many times as you can. You have unlimited attempts before the deadline. Subsequent attempts show variations of the problem with the same learning objective.
- Use “Just for Practice” sets to see worked out solutions of problems that are similar to those on your assignment. You can click on “How Did I Do?” in the left pane at each question, when available.

<p>- Question 1</p> <p>1 point</p> <p>How Did I Do?</p> 	<p>Solve the equation: $\sqrt{5x + 20} = 10$</p> <p>$x =$ <input type="text" value="Number"/></p>
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The “Just for Practice” sets provide you a powerful study technique called [retrieval practice](#) where you train your brain to bring the correct information to mind that is needed for the task at hand.

- Use the “Flash Cards” to hone in on particular learning outcomes. Many students credit their use of flash cards prior to quizzes and exams as the reason for their high performance. Repeated practice can move knowledge from short term to long term memory, as discussed [here](#).

Need Help?

Once you are logged in, click on the word **Help** near your name on the top of the screen to access online help. You can also check out the [Möbius Support Site](#) for help, where you can type a topic in the search box or peruse the popular choices on the page. In addition, you can e-mail ehwtechsupport@pfw.edu for troubleshooting. It will be helpful if you can describe the problem in as much detail as possible or provide screenshots.

Getting to the eHW Site

To access *eHW*, enter through Brightspace in the module *e-HW* (Möbius).

Your Work Is Automatically Saved

All of your work is saved up until the last question you were working on, so in case the Internet connection goes down, you have not lost your previous work. You do not have to complete an assignment in one sitting.

How to Submit an Assignment

Be aware that these two buttons behave differently:

After you complete an electronic homework assignment, the only way for your instructor to receive your grade is if you click on the first button, **Submit Assignment**. Your work will be instantaneously graded and you will see your score.

You would click on the second button, **Quit & Save**, to return to the assignment to work on it later.

If you can see it in your Gradebook link, your instructor can see it as well.

If a time limit is set for a quiz or test, then it counts down from when you started the assignment. If you close your browser (or use the Quit & Save button) before clicking on Submit Assignment, the timer will continue to count down.

Questions with Multiple Parts Presented One at a Time

Some questions may be delivered to you one part at a time, such as the one shown below. After you enter your answer, click on **Verify** to move to the next part.

In some questions, the correct answer to the first part of the question may display before you enter the answer to the next part.

After clicking **Verify**, part (b) of the question will display.

Be sure to complete all parts of the questions.

Below is an example of a multi-part question with this feature.

(a) What are Purdue Fort Wayne's school colors?

watermelon and peach chartreuse and periwinkle lemon zest and lime green **black and gold**

To move to the next part after you enter a response, press **Verify**.

Section Attempt 1 of 1

(a) What are Purdue Fort Wayne's school colors?

watermelon and peach chartreuse and periwinkle lemon zest and lime green **black and gold** ✓

Correct response:
black and gold

To move to the next part after you enter a response, press **Verify**.

(b) In which city is Purdue Fort Wayne located? Hint: It's name reveals the answer.

Section Attempt 1 of 1

How to See Your Grades and Past Results

1. Immediately after you complete an assignment, click on **View Details** to see the worked out solutions to the homework.

- Feedback: Grade Report Thank you

Your assignment is complete. Your score was 20 out of 20 (100 %).


Click on **View Details** to see your graded assignment and the worked out solutions. You can also print the solutions to view them offline.



You will be able to view any detailed feedback that is available, with an option to print.

2. Throughout the semester, you may wish to look at the questions and solutions of past eHW assignments that you completed. Go to Brightspace in the module *e-HW* (Möbius) and click on the Möbius Gradebook, where you can see **all** graded attempts in the View Panel. Click on the **Details** link to look back at the questions and the solutions.

- View Panel		Style Numeric						
Showing All (Best) grades, lessons & assignments, All students								
Lesson/Assignment Name	Status	Details	Score	Total	Start	End	Duration	
Math Background Needed Before You Take MA 15400	✔	Details	17	20	Start time is here	End time is here	Time Spent	



Working with Math in Responses

You enter formulas using standard mathematical notation similar to that used in a graphing calculator, following the rules for standard order of operations. Some helpful tips follow for entering responses.

Avoiding Common Math Errors

- Exponents:** Use the caret, ^, for exponentiation, and the letter e for 2.718...
- Parentheses:** As on a graphing calculator, you must use parentheses. When in doubt, you can use the **Preview** option to see it look the way it would in a math text.

Examples:

For $2^{x/13}$, you must type $2^{(x/13)}$

not $2^x/13$... which would be interpreted as $\frac{2^x}{13}$

For $y = \frac{x}{4(x-2)}$, you must type $y = x / (4(x-2))$

not $y = x/4(x-2)$... which would be interpreted as $\frac{x}{4}(x-2)$

- Multiplication:** You can type an asterisk (i.e. *) for multiplication, or just type a letter and a number together (i.e. 2x).
- Square Roots:** The square root function is `sqrt(x)` or you can just type $x^{(1/2)}$ or $x^{0.5}$ instead. Note again that, like on a graphing calculator, $x^{1/2}$ means $\frac{x^1}{2}$.
- Absolute Value:** The absolute value function is `abs(x)`, so something like $2|x+1|-3$ would be typed as `2abs(x+1)-3`.
- Functions:** You should always place the input of a function in parentheses. For example, for $\sqrt{3x}$ you must type `sqrt(3x)`, not `sqrt 3x` which would be interpreted as $\sqrt{3} \cdot x$

For MA 15400 students especially:

- π :** Simply type `Pi` or `pi`. (However, not `PI`.)
- Trigonometric Functions:** The names for common mathematical functions (sin, cos, etc.) are just what you would expect. The inverse trig functions are `arcsin(x)`, `arccos(x)`, and `arctan(x)`. Also, trigonometric functions are all set to work in radians.


Using the Preview Option in Responses

Use the **Preview** option to view your response as a typeset mathematics expression. **Preview** demonstrates how the system interprets your entry (inspecting it for misplaced parentheses and other unintended keystrokes).

For example, suppose you were to type $\sqrt{179} + 3/\pi$ in the box. (Note that this is incorrect.)


Enter the following in the response box.
Type pi for π . Use the forward slash key (/) for division.

$$\frac{\sqrt{179} + 3}{\pi}$$

TIP: Click on the Preview icon after the box (which looks like ) to check your formula:

Preview x


$$\sqrt{179} + \frac{3}{\pi}$$
Close



After clicking Preview, you can correct your response before submitting it for a grade.


Preview x


$$\frac{\sqrt{179} + 3}{\pi}$$
Close



Nested Parentheses

To computers and graphing calculators, brackets such as [or] or braces such as { or } are not equivalent to parentheses.

For example, to enter $3^{2/(x+1)}$ you would type $3^{(2/(x+1))}$ 

as opposed to $3^{(2/[x+1])}$. 

TIP: Using spaces may help readability.

For example, the expression $3^{(2/(x+1))}$ could be typed $3^{(2/(x+1))}$ to be read more clearly. This is where using the **Preview** option, shown above, can be very helpful.

Order of Operations

Order of precedence is as follows:

- Parentheses
- Exponents
- Multiplication and Division (from left to right)
- Addition and Subtraction (from left to right)

TIP: Some students use the mnemonic:

Please
Excuse
My Dear
Aunt Sally


For example, if you were to compute $8 \div 4 \times 2 + 3$, multiplication and division outrank addition, but multiplication and division are the same rank.

Rules for Rounding

Standard rules for rounding numbers apply.

For example, suppose we are rounding the following calculations to two decimal places.

NORMAL FLOAT AUTO REAL RADIAN MP
 1.12^2
1.2544




Look to the right of the rounding digit..

If, after the rounding digit, there is a 4 or lower, we truncate.

So 1.12^2 to two decimal places is $1.12^2 \approx 1.25$


If, after the rounding digit, there is a 5 or higher, we round up. So 1.12^8 to two decimal places is $1.12^8 \approx 2.48$

NORMAL FLOAT AUTO REAL RADIAN MP
 1.12^8
2.47963176

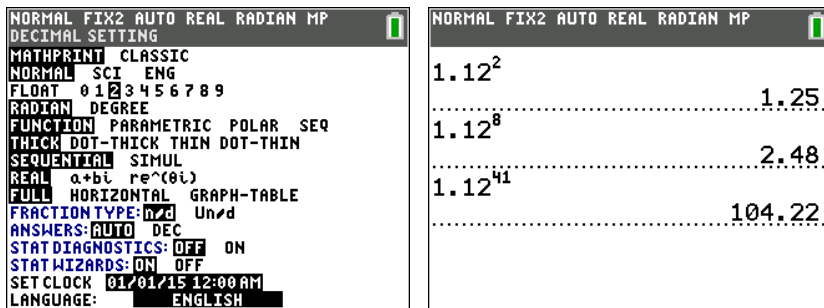


and 1.12^{41} to two decimal places is $1.12^{41} \approx 104.22$

NORMAL FLOAT AUTO REAL RADIAN MP
 1.12^{41}
104.2170869

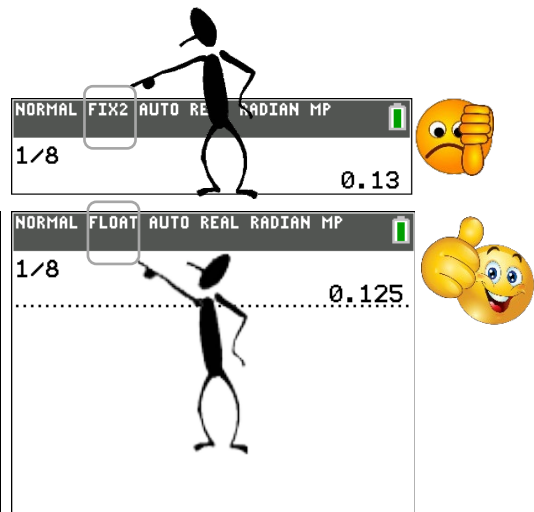


Your calculator mode can be helpful to report answers to a selected number of digits. Press MODE, highlight the number of digits you want, and press ENTER.



However, use **caution** when doing so! It is easy to forget to change it back to FLOAT and report incorrect results when you need more precision.

If you want 1/8 reported to full precision and your mode is not set to FLOAT, you could be misled by your calculator! Notice the status bar indicates FIX2 to help you see you have it on this setting.



If you press MODE and change it back to FLOAT, you will not have any automatic rounding.



10. Help!

So you're working your hardest, doing the assignments, studying every night, but it's just not enough? Don't give up. Take a break and come back and try again! Problem solving requires persistence. If you don't understand something the first time, you're in good company. Even Einstein had trouble and said, "Do not worry about your difficulties in Mathematics. I can assure you mine are still greater." Remember, there's no substitute for daily preparation. Get help as soon as any problems arise. Here is a list of resources:

Resource 1. Talk to your instructor. Use the office hours.

Resource 2. Use the features of eHW, including viewing the details of worked out solutions, the *Just for Practice* homework sets, and eHW *Flash Cards*.

Resource 3. Use the supplemental resources in Brightspace. You can find lessons, videos, and interactive figures to help you.

Resource 4. If you can, connect with other class members outside of class and do your homework together. A good meeting place is the Math Tutoring Center, KT G19 where there is access to a tutor at no charge. No appointment necessary. See your Brightspace course for the days and times KT G19 is open.

Resource 5: Use the [Piazza Discussion Board](#). You can even post anonymously.