

# Mrs. McCarty's Pre-Calculus B Course Syllabus

## Course Description/Overview

Pre-Calculus is a rigorous mathematics course that extends the concepts learned in Algebra II and adds new concepts, primarily trigonometry, with the intent of building a bridge to calculus courses. The primary goal is to learn analytical and problem-solving skills by using algebraic, graphical, and numerical techniques.

### **Materials:**

- Pencils and pens,
- Textbook
- Graphing calculator (preferably TI-84)
- Notebook paper, and a 3-ring binder or folder to hold both notes and homework

### **Course Content**

- Rational Exponents and Radical Expressions
- Exponential and Logarithmic Functions
- Trigonometric Functions
- Analytic Trigonometry
- Applications of Trigonometry

## Course Policies

**Instruction:** Notes will be presented daily in a variety of methods including PowerPoint presentations, lectures, guided notes, activities, etc. Students are expected to take notes and to keep their notes in a 3-ring binder or a folder.

### ***Homework Policy:***

- Homework will be assigned almost every school day (including over weekends) in order to allow you to explore and practice what you are learning.
- Doing your homework consistently is *essential* in order to achieve success in math. Homework is given for the purpose of learning new concepts and for practicing old concepts.
- Late assignments will not be accepted.
- No homework or make-up work will be accepted after the test day.
- Copied assignments will receive a zero. The original person's assignment will be a zero as well.

### ***Work Requirements:***

- Write your name on all assignments. Any assignment turned in without a name will be thrown away.
- Write the name of the assignment on the paper. (Ex. Pg. 95 #1-15)
- Show all calculations and work even if you do it in your head or on a calculator. All work must be shown in order to receive full credit.

***Absences and Makeup Work:*** Because of the sequential nature of mathematics, for a student to be successful and to learn he/she must be in class daily. Students may download weekly snapshots/calendars from my website. Assignments and notes can be emailed to a student during an absence if the student contacts me. When a student returns from an absence, he/she are responsible for the following:

- Turning in any homework that was due the day(s) of the absence
- Picking up any missed handouts and homework assignment(s) from the makeup folder and updating notes.
- Turning in makeup work

According to school policy, students have three days to turn in assignments missed due to an excused absence; if the absence is unexcused, the student may not make up the missed work. No make-up work will be accepted after the test day.

If you are absent the day before a test, you will take the test on the scheduled date with the rest of the class. If you are absent on a test day, you must make up the test within five school days.

Tests/quizzes can be made up on club day during club time, during Bearcat 25, and during ESS.

Make-up tests must be taken outside of regular class time. All missing work must be turned in before completing the final exam.

***Class Participation:*** Students will be called upon at random; discussion is encouraged when concepts are not understood. At times, we will all be math teachers. Therefore, be willing to share ideas with others.

### **Grading Policy/Assessment**

***Grade Distribution:*** Two primary kinds of grades are earned in this class.

- *Daily Assignments* (40%) – These grades you achieve in process of learning class material (including class discussions, class work, homework, notebook checks, and vocabulary assignments).
- *Tests/Quizzes* (60%) – These are grades you achieve that show knowledge and mastery of material (including exams, quizzes, projects).

20% of the final trimester grade will be determined by the final exam.

### ***Grading Scale***

|          |   |
|----------|---|
| 90 - 100 | A |
| 80 - 89  | B |
| 70 - 79  | C |
| 64 - 69  | D |
| 0 - 64   | F |

***Extra Credit:*** Extra credit can be obtained by working problems on the board or creating a digital video in which the student teaches the viewer about a concept covered in class. For example, the video could teach the viewer how to solve a polynomial equation. The topic must be teacher approved. The video must be accurate and appropriate. Students must be able to prove that they made the video. No credit will be awarded for plagiarism. Videos may be emailed to me at (holly.mccarty@anderson.kyschools.us) or posted on YouTube. Videos must be emailed to me before the day of the final exam. Students may earn up to 10 extra credit points for each video. Two students may split the extra credit if they make a video together.

**Study Island:** Students should expect at least one assignment on Study Island a week. Students may trade in blue ribbons for rewards. A blue ribbon is awarded when a student answers 70% of the questions correctly. A minimum of ten questions must be completed. \

*1 blue ribbon = a piece of candy*

*3 blue ribbons = a homework pass*

### **Classroom Rules:**

1. Be in your assigned seat (with materials) *ready to work* when the tardy bell rings.

2. Listen when the teacher is speaking.

*If you have a comment or question, raise your hand until called upon.*

3. Class participation is required.

4. Respect all property. (School property, personal property, and other's property)

*DO NOT sit at my desk or assume that what's mine is yours.*

5. Be respectful in word and action.

*Do not talk out of turn or use curse words. Stay awake, keep your head off your desk, and be quiet during announcements.*

6. Respect all ideas given in class.

*Do not criticize anyone's ideas or thoughts.*

7. ALL school rules apply in class.

*This includes the dress code, the restriction on electronic devices, the tardy policy, etc.*

### **Classroom Expectations:**

- Come to class ready to learn.
- Be responsible for your work. Bring supplies and homework every day.
- EVERY student is expected to contribute to the class.
- Work quietly. If you finish all of your assigned work early, you may: a) work on Study Island b) read independently c) work on extra credit d) work on an assignment for another class. DO NOT TALK OR DISTURB OTHERS.
- Seek additional help if a topic seems difficult or requires more explanation.
- Hall passes are a privilege. Abuse it and you lose it.
- Food and drink are allowed as long as you don't leave a mess, and large drinks (like McDonald's Sweet Tea) are not allowed.

### **Course Procedures**

**Course Format:** Students are expected to be in their seats working on the bell ringer when the tardy bell sounds. The bell ringer may cover automaticity, review, or ACT questions. Each class lesson will consist of notes, practicing new skills, participating in class activities, and correcting homework. Students may use two hall passes per week. Students are not allowed to congregate at the door during the last 5 minutes of class. Students must remain seated until the dismissal bell sounds. In addition, students are expected to listen to the morning and afternoon announcements. If a student is disruptive during the announcements, a discipline referral will be issued.

## **Additional Information**

**Extra Help:** Get extra help when you need it. Students can attend tutoring during the school day during Bearcat 25. The schedule is attached. ESS is offered after school. ESS times and Bearcat 25 times and locations will be posted in the classroom. Study Island is also an excellent resource for extra help.

### ***Apps that will be used in class:***

- MyHomework
- Socrative
- Infinite Campus
  - Username: Student id number
  - Password: first initial last initial (lowercase) birthday (MMDDYY) ex). js032598
  - District Code for the app: WNSMPW
- QR Code Scanner

### ***Personal Statement***

- Solving problems involves asking questions and taking risks.
- Good students seek help sooner than later.
- Try all problems on an assignment. Do not stop at the first one you do not understand. “If you don’t know how to solve a problem, do what you know how to do.” In other words, “TRY SOMETHING.”
- Bring a positive attitude.
- Be proactive about studying. Use outside resources such as textbooks, other math teacher, peers, older siblings, and websites. Any and all of these strategies can help you understand the concepts we will be studying more thoroughly.

\*Each policy may be modified if the need arises during the course of the trimester/year.

### ***Contact Information:***

School telephone/voice mail: (502)839-5118

Best time to reach me directly: 4<sup>th</sup> period 12:40 – 1:52

School e-mail address: [Holly.McCarty@anderson.kyschools.us](mailto:Holly.McCarty@anderson.kyschools.us)

Website: <http://www.anderson.kyschools.us/HollyMcCarty.aspx>

## Math Resources – For Parents and Students

Does your child need some extra help and examples with a specific math topic? The following websites may help:

\*[www.khanacademy.org](http://www.khanacademy.org) – You have to create an account, but it's free. There are short videos (boring but good) on every math topic imaginable.

\*[www.purplemath.com](http://www.purplemath.com) – Algebra lessons over a ton of topics; includes videos and written examples

\*[www.freemathhelp.com](http://www.freemathhelp.com) – text and video lessons on a variety of math topics. You must register, but it's free

\*[www.mathisfun.com](http://www.mathisfun.com) – extra practice and instruction on Pre-Algebra and Algebra topics. Also includes a tutoring forum, puzzles and teaching games.

\*[www.brightstorm.com](http://www.brightstorm.com) – video lessons for Algebra through Calculus topics. It also includes ACT prep.

\*[www.math-play.com](http://www.math-play.com) – games on a variety of topics. Great extra practice!

Here are some apps that may also be useful:

\*Math Ref – includes helpful formulas, figures, tips, and examples of equations and concepts. It also includes example problems and solutions (\$0.99)

\*Wolfram Alpha – a computational knowledge engine (not just math) that will give solutions, graphs, and explanations. (\$2.99)

\*GeometrIQ – a Geometry picture game over common topics. It's fun! (free)

\*DragonBox – practice with solving equations in a form of a fun game (\$5.99 – and worth it)

\*Math Sprint – geared toward younger kids but helps with multiplication and mental math. (free)

Is your child ready to prepare for the ACT or PLAN test? Here are some study options

\*[www.freerice.com](http://www.freerice.com) – ACT prep; not all is math but some is

\*PLAN Test: There are sample test questions at the bottom of the page.

<http://www.act.org/planstudent/tests/>

\*ACT Test: There are sample questions for each subject area to the left side of the page.

<http://www.actstudent.org/sampletest/>

\*COMPASS Test: <http://www.act.org/compass/sample/>

\*ACT Practice Test online: <http://www.4tests.com/exams/examdetail.asp?eid=13>

\*ACT Practice and Tutorial: Create an account and then work through a tutorial before you work practice questions. <https://www.number2.com/>

\*\*\*Note – If your child does not know their multiplication facts, please find time to make sure they memorize these. Flashcards and apps (just search for multiplication facts) are both good options. It's tough to learn Algebra and Geometry without strong multiplication and division skills.

## ACHS Math Department Calculator Information

| Class                             | Calculator Use | Type of Calculator |
|-----------------------------------|----------------|--------------------|
| Algebra 1                         | required       | graphing           |
| Geometry, Pre-AP Geometry         | required       | graphing           |
| Data & Measurement                | required       | graphing           |
| Pre-AP Data & Measurement         | required       | graphing           |
| Algebra 2, Pre-AP Algebra 2       | required       | graphing           |
| Pre-Calculus, Pre-AP Pre-Calculus | required       | graphing           |
| Introduction to College Math      | required       | graphing           |
| AP Statistics                     | required       | graphing           |
| AP Calculus                       | required       | graphing           |

A "graphing calculator" is a handheld calculator/computer with built-in mathematics software capabilities, including graphing. Prices on new models range from about \$90 - \$130.

ACHS math teachers have selected the TI-83Plus/TI-84Plus graphing calculators for classroom instruction and demonstration.

- Students choosing to purchase a calculator other than the models listed below should make certain that it has the same features and capabilities before making the purchase.
- Students who need to purchase a new graphing calculator should take care to purchase "new" technology.
- Students who have a TI-82 or TI-83 do not need to purchase a new calculator.

What to purchase NEW: TI-84Plus or TI-84PlusSE

Both of these are upgradeable. The 84Plus has a faster processor than the TI-83Plus and is more user-friendly. The SE (Silver Edition) models have much more memory than the regular models.

Where to purchase NEW calculators:

- Retail stores: WalMart, Office Depot, Staples, Target, and KMart are examples of local stores that usually stock these models. Compare prices before you buy.
- Online shopping: There are many online sites that sell these calculators. A simple search for "TI-84 Plus" will produce nearly 14,000 results!! Here are a few examples of sites for online shopping for NEW calculators: [www.schoolmart.com](http://www.schoolmart.com) [www.usedcalculators.com](http://www.usedcalculators.com) [www.graphingcalculators.net](http://www.graphingcalculators.net) [www.ebay.com](http://www.ebay.com)

What to purchase USED: TI-83 or TI-83Plus

Please do not buy a "new" TI-82 or TI-83 in a store unless the price is drastically reduced.

These calculators represent OLD TECHNOLOGY and cannot be upgraded.

Where to purchase USED calculators:

other students, friends, online sites such as [www.usedcalculators.com](http://www.usedcalculators.com) or [www.ebay.com](http://www.ebay.com)

- We do not recommend or endorse specific dealers or locations. The retail stores and online sites listed above are merely examples of the many possibilities available.
- Compare the prices & the shipping costs, and only make purchases from trusted stores and sites.
- If you don't find what you're looking for, keeping looking. Don't get talked into purchasing a model that isn't what you want.

What NOT TO BUY (new or used): Please do not purchase TI-81, TI-85, TI-86, TI-89, or Casio calculators. These models do not have many of the functions and features needed for high school math classes.

Arrangements can be made for students who qualify for free/reduced lunch & fees or who have financial situations requiring special consideration. Please contact your child's math teacher for more information.

\*While helpful in some situations, calculator apps for smart phones are not an option because they are not allowed on in-class, state, or national tests.

## **Mrs. McCarty's Pre-Calculus B Syllabus Signature Sheet 2014-15**

Signature(s): Discuss this course and behavior syllabus with your parent(s) or guardian(s). Please sign and return the last page to me by **(Friday, March, 6th)**. I am looking forward to working with you this year.

I, \_\_\_\_\_ (Student), have read, understand, and accept the Pre-Calculus syllabus and course expectations.

I, \_\_\_\_\_ (Parent/Guardian), have read, understand, and accept the Pre-Calculus syllabus and course expectations.

\_\_\_\_\_  
(Student Signature)

\_\_\_\_\_  
(Parent/Guardian Signature)

**Parents: Please answer the following questions.**

Do you access to parent portal?      ☐ Yes      ☐ No

What is your email address? \_\_\_\_\_

What is your phone number? \_\_\_\_\_