**AP Calculus AB 2019-2020**

**Mrs. Pence – Rm. 2408**

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***Be RESPECTFUL*** ● ***Be RESPONSIBLE*** ● ***Build RELATIONSHIPS***

***You don’t have to be a MATH EXPERT to be an EXPERT MATH LEARNER!!***

Welcome!

**Course Description:** This is a rigorous college level calculus course that is the basis for many fields of study in college including the further study of mathematics or science. Topics include limits, continuity, derivatives, and integrals. An emphasis is placed on graphical interpretation and understanding of calculus concepts and on the application of those concepts in problems from many fields of study. Calculus AB is equivalent to a first semester college Calculus course. It is appropriate for students looking to study business, science, technology, or engineering at the college level. Successful completion of the Advance Placement Calculus Test in the spring can result in one semester of credit from many colleges and universities.

**Expectations:** All students are expected to abide by all policies stated in the CNHS Student Handbook; choosing otherwise will result in the consequences detailed in the handbook.

Additionally, students are expected to be **R3** every day:

1. Be **Respectful** – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

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1. Be **Responsible** – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Build **Relationships** – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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***BE A MULTIPLIER OF THE BULLDOG WAY***

**Supplies:**

* pencil & eraser ● TI-83 or TI-84 graphing calculator\*\*
* binder (1-inch to 2-inch) \*\**NOTE:* Please see attached letter concerning
* notebook or loose-leaf paper calculators and how to rent one, if needed.
* 5 dividers for binder ● Textbook: *Calculus* 6th ed. by Hughes-Hallet,
* graph paper (optional, but helpful) Gleason, McCallum, et al.

**Grading Policy:** Quarter grades will be calculated by total points. Unit tests will be worth 100 points, MyAP Quizzes will be 24 points\*, and homework/binder checks will be 5-10 points.\* Additionally, extra credit may be available at various times throughout each quarter and added onto the assignments portion of the grade.

(\*This is subject to change if Mrs. Pence deems it necessary.)

Semester grades are made up of final quarter grades plus the final exam score. Each nine weeks grade will be worth 3/7 of the semester grade and the final exam (1st semester) or project (2nd semester) will be worth the last 1/7.

The following scale will be used to calculate quarter and semester grades:

 100-98 A+ 89-87 B+ 79-77 C+ 69-67 D+ 59 and below F

 97-93 A 86-83 B 76-73 C 66-63 D

 92-90 A- 82-80 B- 72-70 C- 62-60 D-

**Test Corrections & Retake Tests:** *ALL students are required to correct their tests as an assignment.* Students then may elect to take a retake test to improve their score. The retaken test will replace\* the original test score. Students will have until the next chapter test to retake a test. Students must retake tests during their resource or at a calculus party (discussed below). If a student does not have a resource and cannot attend a calculus party, it is the student’s responsibility to arrange an alternative time to retake it with Mrs. Pence.

 (\*This is subject to change if Mrs. Pence deems it necessary.)

**Homework Policy:** Homework assignments will be given over each section. Each section’s homework will be assessed based on completion. Late homework is accepted—with a score reduction—up until the chapter test.

**Make-Up Work:** Students are responsible for talking to classmates and Mrs. Pence to get any make up work from excused absences as well as any and all notes from the lesson. Students have the number of days absent to turn in any makeup work without penalty.

**Cell Phone Policy:** Students are expected to be respectful to their classmates, teacher, and themselves by keeping their phones out of sight and on silent during class time. Use of phones during class time will result in consequences including, but not limited to, student loss of cell phone for period/day, phone turned in to dean’s (to be picked up by parent/guardian), detention, phone call and/or conference with parent/guardian, etc.

**Tardy Policy:** Class activities will begin when the bell rings to start class. It is important to be in class on time. The CNHS Handbook policy regarding tardies will be utilized:

 1st tardy: Warning 4th tardy: Discipline referral to dean\*

 2nd tardy: Teacher conference \*Further consequences outlines in handbook

 3rd tardy: Detention

**Calculus Parties:** Together, with the other AP Calculus classes, we will designate certain days and times to have calculus parties. Calculus parties are times when students can get together with classmates and AP Calculus teachers to work on homework, get extra help, complete make-up work, or retake tests. Extra credit is available for those who attend the calculus parties. Any changes or additional dates/times/locations will be announced in advance.

**Final Thoughts:** This is going to be a great year! If you are **R3** every day and always seeking to **be a multiplier** of the Bull Dog Way, then you will maximize your learning and success in this class! And remember:

***You don’t have to be a MATH EXPERT to be an EXPERT MATH LEARNER!!***

Please sign and return this portion to Mrs. Pence. Please contact Mrs. Pence with any questions.

**STUDENT CONTRACT:** *I have read and understand what is expected of me in Mrs. Pence’s AP Calculus AB class. I agree to continually strive to be* ***R3*** *and a* ***MULTIPLIER*** *of the Bull Dog Way. I agree to put forth my best effort every day because I don’t have to be a math expert to be an expert math learner.*

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**PARENT/GUARDIAN CONTRACT:** *I have read and understand what is expected of my student in Mrs. Pence’s AP Calculus AB class. I agree to continually help my student to be* ***R3*** *and a* ***MULTIPLIER*** *of the Bull Dog Way. I agree to put forth my best effort to ensure my student puts forth theirs because my student and I don’t have to be a math experts to be expert math learners.*

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 August 7, 2019

Dear students and parents,

The entire mathematics curriculum at Columbus North High School incorporates the use of calculator technology. A multitude of studies done over the last twenty years have shown that when calculators are incorporated into lessons teaching mathematical concepts, student learning increases both in terms of conceptual understanding and computational proficiency.

# Algebra 1 and Geometry

Students taking Algebra 1 or Geometry will be required to purchase a scientific calculator. These range in price from $6 to $30. Any scientific calculator will work. To make sure it is scientific, look for trigonometry keys labeled “sin,” “cos,” “tan.” Students in Algebra 1 or Geometry **do not** need a graphing calculator. Some students, however, choose to purchase a graphing calculator instead of a scientific calculator so they can use it for all of their high school math courses. If you plan to purchase a graphing calculator that would replace the scientific calculator, you do not need both. Also, if you plan to purchase a graphing calculator please read the descriptions of acceptable calculators given below.

# Algebra 2, Trigonometry, Precalculus, Finite Math, Statistics, Calculus

Students enrolled in these courses will need a TI83 Plus or a TI84 graphing calculator. Because the calculator is required regularly for homework it is important that each student has his or her own calculator. A TI89 is also permissible for Calculus, although it is significantly more expensive than a TI83+ or TI84 and is more complicated to learn.

**If you purchase a TI calculator this fall, please cut the “Points” label from the package and bring it to your math teacher.** Through the volume purchase program, Texas Instruments will provide Columbus North High School with classroom technology if we collect and send in the Points labels. You will be getting the latest in calculator technology and supporting your school. We all come out winners!

A TI 83 Plus is usually available locally for about $90. The TI84 has a faster processor and more memory than the TI83+. It also costs more. Both calculators function the same. We realize the price can be a hardship on many families. There are other more reasonable options. TI83+ calculators can usually be purchased used for under $50 (including shipping) through eBay. If you take good care of your calculator, it can later be resold for the same price.

**Renting a graphing calculator:** If your current financial situation makes it impossible for you to purchase a calculator, we have a calculator rental program. Forms for calculator rental may be picked up from a math teacher, from the department chair or printed from the North Math website. The cost is $12 per year, payable with cash or check to the Columbus North High School.

**If you would be interested in contributing to a fund to provide loaner calculators for students in need of financial support please let us know.**

Sincerely,

Dale Nowlin

Mathematics Department Chair

**Columbus North High School Calculator Check –Out**

**2019-2020**

In an effort to insure success for all, students enrolled in upper level mathematics classes can rent a TI 83+ calculators if there is a financial need and the student’s family is unable to supply the calculator. The cost for renting a calculator is $12 for the year. You can pay with cash or check made out to Columbus North High School**. If you pay with cash, we will call to verify the parent signature below. If you pay with check, the check will serve as verification.**

The calculator listed below is being checked out to the student listed below. It is the responsibility of the student and family to replace batteries as needed. If the calculator is used only for class and no calculator games are played, the batteries should last all year. Playing calculator games shortens the battery life considerably.

If your financial situation changes during the school year and a calculator can be purchased for the student, please return the calculator that has been checked out so that other students can use it. Ebay is a good source for reasonably priced TI83+ calculators if you are looking for one to purchase.

If the calculator is lost or damaged during the year, it is the responsibility of the student and the student’s family to replace the calculator. The cost of replacement is $90.

Student Name (printed) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ID#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Teacher \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Math Class \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Math Period \_\_\_\_\_\_\_\_\_\_\_\_\_

Grade (Circle one) 9 10 11 12

Parent Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent Contact: cell phone \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 home phone \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 work phone \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A calculator will be issued after contact is made with a parent or guardian verifying the information on this form.

To be completed by math department: Calculator # \_\_\_\_\_\_\_\_\_ Bar Code # \_\_\_\_\_\_\_\_