

# AP CALCULUS AB SUMMER ASSIGNMENT

## MORGANTOWN HIGH SCHOOL

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- WHAT DO I NEED TO DO?
  - Go to the following website: [www.khanacademy.org](http://www.khanacademy.org). Click on “Courses” in the top left hand corner. Under “Math by Grade,” click on “High School.” Click on “Algebra II” and “Trigonometry.” For most of the units shown (the names of the units you are required to complete for this assignment are shown below), you will be taking the unit test; you will also take the “Course Challenge.” You may choose to watch the videos for each lesson and/or try the practice problems before taking the unit tests—as a matter of fact, the Morgantown High School Math Department strongly advises you to at the very least try all of the practice problems for the unit BEFORE taking the unit tests; if you need any help with the content, go back and watch the videos for the lessons from the unit. If you have already mastered the content, then you may jump directly to the unit tests and course challenge.
- WHAT WILL I TURN IN AND HOW WILL I TURN IT IN?
  - For each unit, write the unit’s name at the top of the paper (such as “Functions”) and then copy each question, show the work that you did to answer each question, and put a box around the final answer for each question. Put your work and answers for each unit in a folder with your name written on the outside in permanent marker. Your teacher will ask you to turn in the summer assignment folder for a grade in August.
- WHICH UNIT TESTS WILL I BE TAKING?
  - FROM ALGEBRA II
    - Polynomial Arithmetic
    - Complex Numbers
    - Polynomial Factorization
    - Polynomial Division
    - Polynomial Graphs
    - Rational Exponents and Radicals
    - Exponential Models
    - Logarithms
    - Transformations of Functions
    - Equations
    - Trigonometry
    - Modeling
    - Rational Functions
    - COURSE CHALLENGE
  - FROM TRIGONOMETRY
    - Trigonometry with Right Triangles
    - Trigonometry with General Triangles
    - The Unit Circle Definition of Sine, Cosine, and Tangent
    - Graphs of Trigonometric Functions
    - Trigonometric Equations and Identities
    - COURSE CHALLENGE
- WHEN IS THE SUMMER ASSIGNMENT DUE?
  - The folder with all of your work for each unit test and the course challenge will be collected during the first week of school for a grade.
  - IMPORTANT NOTE: The content covered in the summer assignment will be tested in AP Calculus AB. It is important that you know how to do the kinds of problems included in the summer assignment so that you are ready to be tested on these skills in AP Calculus AB.