

# Mathematics Department

## Mathematics success

Cathedral High School's Math Department works to ensure that all students study mathematics successfully at a pace and depth appropriate to their individual needs. Our math program provides three different levels of study for students of varying mathematical ability and interest: honors, academic, and regular college preparatory. AP and IB classes are available for juniors and seniors. All students are required to be enrolled in a math class every semester at Cathedral.

## SOUND CURRICULUM AND EFFECTIVE TEACHING METHODOLOGIES

We understand that our students approach the study of mathematics from a broad spectrum of experience and needs. However, we believe that sound mathematics curriculum coupled with consistent and effective teaching and learning methodologies will enable every student to:

- Apply critical thinking skills in solving problems of everyday life
- Participate intelligently in civic affairs
- Compete in the high-performance workplace
- Develop connections among topics both within mathematics and between disciplines
- Acquire an appreciation for the beauty and intrinsic order of mathematics

## WE BELIEVE THAT EACH STUDENT CAN BE SUCCESSFUL IN LEARNING TO:

- Value mathematics
- Become confident in his or her own ability
- Become a mathematical problem solver
- Communicate mathematically
- Reason mathematically

By offering a broad range and consistent continuum of courses from basic algebra to AP calculus, we believe that students are afforded better opportunities to experience success in learning mathematics.



## MATH COURSES OFFERED

The high school placement test is used to assign students to the appropriate math level: honors, academic, or college preparatory. Students must pass a proficiency test and/or algebra or geometry in order to test out of those courses. We work to place each child in the class where he or she will be challenged, yet successful. While each student's math ability is measured individually, coursework is typically as follows:

**FRESHMEN:** Algebra I or Geometry

**SOPHOMORES:** Geometry or Algebra II

**JUNIORS:** Algebra II or Pre-Calculus

**SENIORS:** Pre-Calculus, AP Stats, AP Calculus, or IB Math SL\*

\*Multivariable Calculus, Differential Equations and Linear Algebra are available for very advanced students.

Students who pursue the International Baccalaureate Diploma Programme may complete additional requirements for the IB curriculum while enrolled in Honors Pre-Calculus and AP Calculus. Students who wish to follow this route must have finished Algebra II by the end of their sophomore year. More information about the curriculum can be obtained from the IB Coordinator.



## Indiana Math League

Participants in this statewide competition meet once a month before school to take challenging standardized math tests. More than 600 students participate in this competition, which is designed to further the study, practice, and appreciation of mathematics.

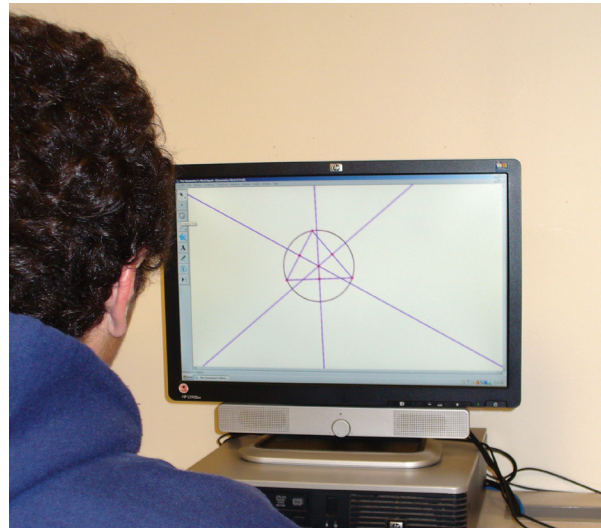
## American Mathematics Contest

Administered by the Mathematical Association of America, the contest is dedicated to the goal of strengthening the mathematical capabilities of our nation's youth. The MAA believes that one way to meet this goal is to identify, recognize and reward excellence in mathematics through a series of national contests.



## Franklin College Math Day

Upperclassmen may compete in teams of three in Franklin College's annual Math Day competition.



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