

Math Administrative Guidelines

Addition to Policy IKF

It is the goal of MCS that all students be afforded the opportunity to reach mastery in mathematics and will accordingly require that our students become responsible learners who are active, self-monitoring participants in their education. Monroe County Schools will incorporate the *High Schools That Work* Philosophy and WVDE demand for more rigorous courses, by requiring an Algebra I exit exam to ensure that students have the necessary skills to proceed to the next mathematics course in their sequence for graduation.

In order to support students as they progress through their math courses in their chosen pathway toward their career or post-secondary education goals, the mathematics department has instituted two methods of support:

- 1) Specific sequences of classes based on an individual student's achievement in math classes with the opportunity for that student to change sequences depending on demonstrated achievement and career or further educational needs; and
- 2) Availability of support based on students achieving benchmark level in pre-requisite skills and CSOs. These support mechanisms may include guided academics, credit recovery, retaking classes, and after-school and summer tutoring.

Under Policy 2510, beginning with students who entered the 9th grade in 2008 (graduating class of 2012), students choose either the Professional or Skilled Pathway (Entry Pathway is no longer offered):

- All students are required to complete 4 credits of mathematics. 3 of the 4 credits must be Algebra I and above.
- It is the intent that all students will take mathematics annually, but must take at least three mathematics classes in grades 9-12.
- Students in the Professional Pathway: The recommended course sequence, which may include college courses, AP courses or virtual school courses, for students in the professional pathway is Algebra I, Geometry, Algebra II, Trigonometry, and Pre-Calculus. The mathematics courses selected for credit must be relevant to the student's concentration. Junior and senior students in the professional pathway and college bound students in the skilled pathway, who do not achieve the State Assessment College readiness benchmark for mathematics, shall be required to take a college transition mathematics course during their senior year. (This benchmark will be determined by WV Department of Education.)
- Students in the Skilled Pathway: The recommended course sequence in the skilled pathway is Algebra I, Geometry, conceptual mathematics, college transition mathematics or Algebra II. College Transition Mathematics must be offered annually and will be counted as a mathematics credit.

Students who entered the 9th grade in 2006 or 2007 (the graduating classes of 2010 and 2011) have the following math requirements:

- All students are required to complete 4 credits of mathematics:

- For students in the Professional or Skilled Pathway, 3 of the 4 credits must be Algebra I and above.
- For students in the Entry Pathway, at least 2 of the credits must be Algebra I and above.
- It is the intent that all students will take mathematics annually, but must take at least three mathematics classes in grades 9-12, regardless of the number of high school math credits attained before the ninth grade.
- Students in the Professional Pathway: The recommended course sequence, which may include college courses, AP courses or virtual school courses, for students in the professional pathway is Algebra I, Geometry, Algebra II, Trigonometry, and Pre-Calculus. The mathematics courses selected for credit must be relevant to the student's concentration. Students in the professional pathway and college bound students in the skilled pathway, who do not achieve the State assessment College readiness benchmark for mathematics, shall be required to take a college transition mathematics course during their senior year.
- Students in the Skilled Pathway: The recommended course sequence in the skilled pathway is Algebra I, Geometry, conceptual mathematics, college transition mathematics or Algebra II. College Transition Mathematics must be offered annually and will be counted as a mathematics credit.
- Students in the Entry Pathway: The math courses selected for credit must be relevant to the student's concentration and pathway. Successful completion of Applied Math I and II is equivalent to an Algebra I credit and a credit for a course prior to Algebra I.

Algebra I: Because of the extreme importance of mastery of the Algebra I content standards and objectives (CSOs), eighth grade students who are projected to need additional time in the ninth grade to master Algebra I CSOs will be identified by a data-based decision making process determined by the math cohort. This determination will be made during the eighth grade year and students will be scheduled for ninth grade accordingly for Algebra I with or without a preceding Algebra I support class. Research indicates that the best option for scheduling additional time to succeed in mastery of Algebra I CSOs is to do so within the same year. Therefore, students who need extra support will be scheduled for an Algebra support class during the first trimester of their ninth grade year. If they are successful in that class, they will take Algebra I during the second and third trimesters of ninth grade. Students who are not successful will follow an appropriate sequence determined by the math department.

A Monroe County Math Proficiency Test (MCMPT) will be administered at the end of Algebra I to assess whether a student possesses the pre-requisite math skills for upper level math classes including Algebra II and beyond. The MCMPT will be administered as an end of course or second half of Algebra exam for Algebra I. Moreover, students who do not pass this exam at a 75% level will be required to enroll in Geometry Support before entering Geometry. Students who have not passed the MCMPT will retake the test at the end of Geometry. Students who score below 75% and who want to take Algebra II will be given several support options in order to assist them in passing this exam at a 75% level. (e.g., the option of taking first half of College Transition Math, guided academics, or attending after-school and summer tutoring as available).

Students who need extra time and who take Algebra I Support and Geometry Support may receive up to one math credit toward graduation upon successful course completion. It is recommended that students who are in the most need of continuous math instruction be enrolled in at least one math course each year in high school.

Algebra II: Algebra II is seen as necessary for success in college and for placement above college developmental math courses. In order to maximize chances of a student's success in Algebra II, he/she shall demonstrate proficiency in the pre-requisite skills. To enter Algebra II, a student must successfully complete Algebra I and Geometry and pass the MCMPT with a score of 75% or above. (An exceptional math student may opt to take Algebra II prior to Geometry, but must have approval from the math department.) A student who wants to enroll in Algebra II but who does not attain this score may follow another sequence of classes offered by the math department (e.g., Conceptual Math), or enroll in credit recovery or guided academics as available, to remediate the necessary skills until he/she can pass the MCMPT. Students will be afforded the opportunity to retake the MCMPT according to a schedule determined by the math department but at least once per trimester.

College Transitional Math: Prior to the beginning of the student's 12th grade year, the administration and mathematics department will review WESTEST2, PLAN, and/or ACT scores to determine if a student requires a college transitional math course. Students in the professional pathway and college bound students in the skilled pathway, who do not achieve the State assessment College readiness benchmark for mathematics, shall be required to take a college transition mathematics course during their senior year.

Members of the Monroe County Schools math co-hort will create and approve all exit exams and submit a finalized copy and answer key to the administration at JMHS, MVS and PMS. All special education students working toward a regular diploma will be provided modifications as stipulated on their IEP. If a special education student is enrolled in a lab course or guided academics, the teacher can provide additional supports and attempts at the exit exam.

To receive credit in Algebra I:

- Algebra I/ 8th grade option only: Final Year Grade of A, B and Successful Completion of Monroe County Math Proficiency Test (MCMPT) with a score of 75% or above.
- Algebra I/9th grade and above: Grade of A, B, C, or D
- Special Education student requirements are based on IEP team decision.
- A student cannot register for Geometry until successfully completing Algebra I.
- Students who fail a trimester of Algebra I can re-enroll in this course the following trimester or opt to complete the credit recovery program. A student must complete MCMPT upon repeat of the course or at completion of credit recovery program.
- Students can request to complete an additional MCMPT exam prior to beginning of the following school year.

To receive credit in Geometry:

- **Geometry: Grade of A, B, C or D**
- **Students who fail a trimester of Geometry can re-enroll in the course the following trimester or opt to complete the credit recovery program.**
- **Students may be required to take a Geometry Exit Exam at the discretion of the math department. The purpose of the exam would be to assess geometry proficiency and the exam grade may be part of the trimester grade.**

***Special Education student requirements are based on IEP decision.**

Algebra I or Geometry Credit Recovery

If a student is unable to pass Algebra I or Geometry, he or she may have the option of attending a credit recovery program. All Monroe County credit recovery policies shall apply. As noted by the WVDE, credit recovery is provided to ensure that students master content, and it is not contingent upon "seat" time.

A summer program for Algebra I or Geometry Credit Recovery may be offered at the discretion of the Monroe County Board of Education and according to availability of funds. The attendance and performance requirements as well as the curriculum and assessments will be determined by the JMHS math department. The curriculum will make use of the research-based technology program that is currently used at JMHS (e.g., Plato and NovaNET) in conjunction with teacher developed lessons to assist students in "filling in the gaps" that occurred during the regular session. The student will be benchmarked each week to determine if "gaps" still exist. All parents will be required to provide transportation to and from the summer program.

As indicated in the credit recovery policy, students may be required to pay fees for after-school and summer credit recovery programs, and scholarships may be offered.

WESTEST Requirements

All students must have the goal of meeting mastery in mathematics. The 2010 WESTEST₂ will be completed by all high school students grades 8-11. Any student who does not meet mastery on the WESTEST₂, or whose 8th grade EXPLORE mathematics score demonstrates lack of pre-requisite skills for success in Algebra I, will either be assigned to a first trimester math application/skill recovery course or Response to Intervention lab, provided that personnel are available to teach course. Demonstration of mastery is a must for 21st Century learners that are self-directed and responsible for their educational progress. Students identified with special education needs or have demonstrated academic needs that the SAT team is actively addressing can receive administrative exemption to this rule if the IEP team or SAT deems appropriate and documentation of reason is provided accordingly.

Benchmark Assessments and Response to Intervention

To further ensure that students can demonstrate competency in Algebra I and Geometry, all James Monroe High School students will complete a series of benchmark assessments administered by the classroom teacher or benchmark coordinator.

Students who do not demonstrate mastery of the CSOs as evidenced by either benchmark assessments or classroom grades may be assigned to guided academics for further support. Additionally, such students may be reassigned by the math department to a different sequence of math classes than originally projected.

The implementation of Benchmark Assessments and appropriate Response to Intervention will follow the most current Monroe County Response to Intervention Handbook Guidelines for Mathematics.

Implementation

These mathematics guidelines will be fully implemented during the 2009-2010 school year. All students completing Algebra I will complete a MCMPT exam. Students who are unable to pass the exam will be strongly encouraged to complete summer program. The administration and math department of Mountain View, Peterstown Middle, and James Monroe High School will notify parents of student's identified deficiencies and available summer programs. The administration of JMHS will also include information on the sequence of math courses required to graduate and encourage parents to contact the school with questions about their child's progress toward graduation. The administration of James Monroe High School, Mountain View Middle, and Peterstown Middle will be responsible to notify parents and students of the requirements. Schools are encouraged to put these requirements in the planner distributed to students and include the information in a summer letter of notification to parents.

Before entry into JMHS, students will be assigned a four year math course sequence depending on their math performance in eighth grade. This will be a data driven decision. At JMHS, during the student's high school career, a student will have the option of moving between sequences as a result of demonstrated achievement during each math class, performance on MCMPT, and benchmark assessments. However, any change in the sequence that an individual student will follow must be approved by the math department.

Math Administrative Guidelines Middle School

The Monroe County Schools Math Cohort determined that weakness in student 8-12 grades math performance was a direct result of deficits in fractions, decimals, word problems and the language of mathematics. To further address the need to provide all students with math readiness skills, Monroe County Schools will require all 5th - 8th grade students to complete benchmark assessments. Students in 5th and 6th grade will be required to complete an end of the year exit exam. Individuals seeking

information about the skills taught at each grade level are encouraged to go to the WVDE website and review CSOs (also, please see attached chart.) They are also encouraged to go to the Quantile website to review pre-requisite skills. Parents will be provided information on their child's performance on the grade level skills needed to be successful in the following school year's math directives based on the assessment results.

Any student who demonstrates skill area deficits either through WESTEST2 results or through Benchmark Assessments will be supported through the Response To Intervention process.

A student who demonstrates skill area deficits will be strongly encouraged to attend an afterschool or summer program to assist in building the knowledge base required to be successful in mathematics. Research on summer learning loss indicates that many students "lose" important skills over the summer that are critical to future performance.

The Monroe County Schools Math Cohort will be responsible to create and provide each building level administrator with uniform exit exams to be used at Mountain View Elementary/Middle School and Peterstown Middle School.

Algebra I in 8th grade: For a student to be admitted to Algebra I in the eighth grade, he/she must have fulfilled all of the following requirements in the 7th grade:

- B or better yearly average in math
- Teacher recommendation
- Pass the **entrance** exam with 75% or better
- Demonstrate Mastery or above in the WESTEST2 Math Assessment (if scores are available)

In order to receive a high school credit for Algebra I in the 8th grade, students must

- Have a B or better yearly average in math
- Pass the MCMPT with 75% or better

Students who complete Algebra I in the 8th grade must pass the MCMPT before being permitted to enter either Geometry or Algebra II in 9th grade.

The following is a link to the CSO chart/ fractions:

<http://wveis.k12.wv.us/nclb/Content/public/cso/popUp.cfm>

The following is a link to the CSO chart/ decimals:

<http://wveis.k12.wv.us/nclb/Content/public/cso/popUp.cfm>

The following is a link to the 5th grade math CSOs and student performance comparisons:

<http://wveis.k12.wv.us/nclb/Content/public/cso/popUp.cfm>

The following is a link to the 6th grade math CSOs and student performance comparisons:

<http://wveis.k12.wv.us/nclb/Content/public/cso/popUp.cfm>

The following is a link to the Quantile Framework

www.quantiles.com

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