

# 7<sup>TH</sup> GRADE PARENTS...

This week, May 7-11, 2007, 7<sup>th</sup> grade math teachers, parents, and students will be making decisions regarding 8<sup>th</sup> grade math courses for the 07-08 school year.

Students who received an overall score of **proficient (4) or advanced (3)** on their 2006 WKCE test will receive a recommendation letter for 8<sup>th</sup> grade math (Accelerated Algebra or CMP 8 math) from Mrs. McCarthy or Mrs. Ritchie by Monday, May 7. Parents are asked to read through the information carefully. Recommendations are given on an individual basis and pertain only to individual student abilities, interests, and work habits. Parents are asked to make a final choice, then return the bottom portion of the recommendation to their math teacher by Friday, May 11, 2007.

The classroom teacher is an expert regarding individual student math achievement. For most students, the decision to recommend a student for Advanced, Accelerated Algebra, or for the regular CMP 8 math class, is easy. However, some students are "on the line". It is important for those students and parents to go over the expectations and criteria carefully.

Parents need to make careful decisions. Does your child complete their homework without being pushed? What is his/her attitude toward math? Taking Advanced Algebra is a BIG commitment: can your child handle up to an hour of Math homework every day (in addition to other academic classes)? Can he/she handle intense, accelerated coursework that can be a challenge to make up after an absence? Will these challenges create bad feelings at home? Will "pushing" a child and placing them in an accelerated class produce failure, creating a child who dislikes math, or has poor self-esteem?

If you do not receive a letter this week, your child may be slated to be placed in the 8<sup>th</sup> grade CMP math class. If you do not receive a letter by May 8, or you have specific questions regarding your child, please contact your child's math teacher.



## QUESTIONS?

**Not sure?**

Please join us on Monday, May 7, 2007 at 6:30 p.m. in the All Purpose Room for a brief meeting regarding Eighth Grade Math options.

You'll hear from Toki 7<sup>th</sup> and 8<sup>th</sup> grade math teachers, Memorial math teachers, and district math staff regarding MMDS's math programming. We will also be on hand to answer any general questions you have that may help you and your child make the best math class decision.



***If you have specific questions regarding the best choice for your child, please contact your child's current math teacher.*** They are the "experts" in assessing your child's math progress at Toki. The best times to reach Mrs. McCarthy or Mrs. Ritchie are from 9:45 to 11:00, or 2:50-3:20.

April 30, 2007

Dear Toki Parent/Guardian:

Akira Toki Middle School wants your child's transition from middle school to high school mathematics to be successful. This transition begins in the eighth grade as you and your student select either Mathematics 8 or Accelerated Algebra. This letter, along with accompanying documents, shares information about this choice with parents and guardians of current seventh grade students.

The **Accelerated Algebra** course is offered in every MMSD middle school. It is not the same as the regular Algebra I class taught in MMSD high schools. It is an accelerated course with rapid pacing and about an hour of homework daily.

The **Mathematics 8** course also focuses on an extensive study of Algebra including patterns of change and functions; representations in the form of graphs, tables, symbolic expressions, and equations; and symbolic reasoning. In addition to Algebra, the Mathematics 8 curriculum also includes Pythagorean Geometry, Transformational Geometry, and Statistics.

Mathematics 8 and Accelerated Algebra are rigorous courses that prepare students for the study of mathematics in high school. You are receiving documents that outline the topics of study in Mathematics 8 and the Accelerated Algebra course. Another document provides information about possible paths available for students who plan to take four years of mathematics in high school.

Please read through the attached documents, as these will assist you in understanding how your current 7<sup>th</sup> grade math teacher came to the recommendation listed, as well as assist you in the event you need to make a decision with your child regarding math in grade 8.

If you have specific questions regarding your child, please contact your child's math teacher at 204-4740. If you would like to attend a general information session regarding MMSD math programming, please join us on Monday, May 7, 2007 at 6:30 pm in our All Purpose room.

Sincerely,

Joe Gothard, Principal  
Akira Toki Middle School

# AKIRA TOKI MIDDLE SCHOOL

## EIGHTH GRADE MATHEMATICS RECOMMENDATION

STUDENT NAME and ID #:
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MATH TEACHER:
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Grades in 6<sup>th</sup> grade math:

MATH GPA grade 6 \_\_\_\_\_

Grades in 7<sup>th</sup> grade math:

QUARTER 1	QUARTER 2	QUARTER 3
Minimal (1)	basic (2)	proficient (3)
		advance (4)
		not available

WKCE Level in 6<sup>th</sup> grade:

Minimal (1)	basic (2)	proficient (3)	advance (4)	not available
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WKCE Level in 7<sup>th</sup> grade:

ABSENCES in math this year: \_\_\_\_\_

**RECOMMENDED CRITERIA** (check all that apply to this student):

	Consistently completes homework on time.
	Consistently does high-quality homework.
	Consistently scores at an advanced level on classroom assignments.
	Consistently makes good use of class work time.
	Consistently shows interest in mathematics beyond the required curriculum.
	Consistently self-motivated as a mathematics learner.

**TEACHER RECOMMENDATION** (check ONE of the following):

	<b><u>EITHER</u></b> Mathematics 8 or Accelerated Algebra
	Mathematics 8

STUDENT \_\_\_\_\_ Math Teacher: \_\_\_\_\_

*Parents: please check your preference below. Remember: the choice that is made is a year-long commitment to the class. Students will not be switched from one class to the other after the second week of the school year.*

<b>PARENT/GUARDIAN PREFERENCE (CIRCLE ONE)</b>	
MATHEMATICS 8	ACCELERATED ALGEBRA

\_\_\_\_\_  
Parent/Guardian Signature

\_\_\_\_\_  
Date

**Please return to your Math Teacher by Friday, May 11, 2007**

# Mathematics 8 Topics of Study

The following topics are presented in the 8<sup>th</sup> Grade *Connected Mathematics* curriculum, published by Prentice Hall. The TI-83+ graphing calculator is used throughout the year.

## Statistics & Data (Statistics)

- Pose questions to explore.
- Collect and analyze data , and interpret the results.
- Distinguish between a sample and a population.
- Select a random sample from a population.
- Use data from a sample to make predictions about a population.

## Symmetry & Transformational Geometry (Geometry)

- Recognize reflectional, rotational, and translational symmetry.
- Perform transformations: translations, reflections, rotations.
- Perform transformations on the coordinate axes.
- Determine lines of reflections, magnitudes and directions of translations, and centers and angles of rotation.
- Analyze the effects of combining two or more transformations .

## Linear Relationships (Algebra)

- Make predictions from linear patterns.
- Recognize that a change in rate will change the slope of a line and the coefficient of the independent variable.
- Explore relationships between symbolic expressions and graphs of lines, emphasizing the meaning of slope and intercept
- Determine the slope of a line from a table and when given 2 points on a line.
- Use symbolic algebra to represent situations and solve problems that represent linear relationships.
- Solve linear equations using a variety of methods (tables, graphs, undoing, symbolically).
- Solve a system of linear equations by graphing.

## Modeling and Functions (Algebra)

- Build models to solve contextualized problems using various representations: table, graphs, and equations.
- Identify functions as linear or nonlinear and contrast their properties using tables, graphs, and equations.

## Pythagorean Theorem & Irrational Numbers (Geometry)

- Find areas of figures drawn on a coordinate grid.
- Understand square roots as lengths of sides of squares.
- Understand how the Pythagorean Theorem relates the areas of the squares on the sides of a right triangle.
- Use the Pythagorean Theorem to solve problems.
- Understand irrational numbers as non-terminating, non-repeating decimals.
- Make connections between area, distance, slope, rational numbers .

### **Exponential Relationships (Algebra)**

- Identify situations, data patterns, graphs, and equations that are exponential.
- Model and solve contextualized problems that are exponential using various representations: table, graphs, and equations.
- Make sense of the symbolic notation in  $y = ab^x$  when working with exponential growth and decay.

### **Quadratic Relationships (Algebra)**

- Identify situations, data patterns, graphs, and equations that are quadratic.
- Model and solve contextualized problems that are quadratic using various representations: table, graphs, and equations.
- Analyze the meaning of maximum and minimum values.

### **Algebraic Reasoning (Algebra)**

- Use appropriate order of operations in evaluating expressions.
- Write symbolic sentences, using parentheses and properties of real numbers to communicate effectively.
- Reason with equivalent expressions.
- Solve linear and quadratic equations symbolically.

### **Permutations & Combinations (Number and Probability)**

- Analyze counting problems that involve choices in different contexts.
- Apply organized lists, counting trees, and networks to enumerate possible outcomes.
- Solve multi-step problems that can be counted efficiently using multiplication.
- Recognize, generalize, and use patterns to make predictions.
- Identify the difference in the structure of problems in which order is not important from those in which it is.
- Develop and apply the fundamental counting principle.

# Accelerated Algebra I Topics of Study

The following topics are presented in the Accelerated Algebra I curriculum. TEXT: *Algebra I: Equations, Graphs, Applications*, by McDougal Littell. The TI-83 Plus graphing calculator is used through the year.

## Connections to Algebra

- Write and evaluate variable connections.
- Check solutions to equations and inequalities.
- Use verbal and algebraic models to represent real-life problems.
- Organize data.

## Properties of Numbers

- Graph, compare, and order real numbers.
- Add, subtract, multiply, and divide real numbers.
- Use the distributive property and combine like terms.

## Solving Linear Equations

- Solve multi-step linear equations.
- Solve real-world problems involving ratios, rates, and percents.

## Graphing Linear Equations and Functions

- Graph linear equations using tables of values, point-plotting, intercepts, and slope.
- Identify equations of vertical and horizontal lines.
- Use graphs of linear equations to model and solve real life problems.
- Identify and evaluate functions.

## Writing Linear Equations

- Write linear equations in slope-intercept, point-slope, and standard forms.
- Find the equation of a line using two points.
- Find equations of parallel and perpendicular lines.

## Solving and Graphing Linear Inequalities

- Solve multi-step inequalities.
- Graph linear inequalities two variables.
- Solve absolute value equations and inequalities.

## Systems of Linear Equations and Inequalities

- Solve linear systems by graphing, substitution, and linear combinations
- Model real life situations with linear systems.

## Exponents and Exponential Functions

- Learn properties of exponents.
- Graph exponential functions.
- Model exponential growth and decay.

## Quadratic Equations and Functions

- Solve quadratic equations by using square roots, graphing, and the quadratic formula.
- Graph quadratic inequalities.

## Polynomials and Factoring

- Add, subtract, and multiply polynomials.
- Factor polynomials and solve polynomial equations by factoring.

## Rational Equations and Functions

- Solve proportions problems.
- Use direct and inverse variation to solve problems.
- Add, subtract, multiply, and divide rational expressions.
- Solve rational equations.

## Radicals and Connections to Geometry

- Learn about operations with radicals and rational exponents.
- Solve quadratic equations by completing the square.
- Use deductive reasoning to construct proofs.

If a top student takes 8 <sup>th</sup> Grade CMP Math, s/he can take the following path to get to upper level courses at each of the high schools:		If a top student accelerates in 8 <sup>th</sup> grade, taking Accelerated Algebra as an 8 <sup>th</sup> grader	
<b>MEMORIAL</b>		<b>MEMORIAL</b>	
9 <sup>th</sup> Algebra 1A	Algebra 1B	9 <sup>th</sup> Geometry	Geometry
10 <sup>th</sup> Geometry	Geometry	10 <sup>th</sup> Pre Calculus	Algebra 2A
11 <sup>th</sup> Pre Calculus	Algebra 2A	11 <sup>th</sup> Calculus AB	Algebra 3A
12 <sup>th</sup> Calculus	Calculus	12 <sup>th</sup> Calculus BC	Calculus AB