



**Application Due Date:**  
**March 1st**

## INTERNATIONAL STUDENT MATH TEACHER REFERENCE

Student Name \_\_\_\_\_ Date \_\_\_\_\_

School now attending \_\_\_\_\_

The above student has applied for admission to Milpitas Christian School. Your estimate of this student's academic performance, intellectual promise, and character will help us in our admissions process. Please return this form to our office at your earliest convenience. Thank you for your help.

Milpitas Christian School is an independent, interdenominational, private Christian school for grades K-8, offering an intellectually challenging curriculum. MCS values academic potential and achievement as well as creativity, strong motivation and respect for others.

Applicant's Math Background (check one)

- Strong in math facts and conceptual skills, consistently above grade level work
- Some or few gaps in math facts or conceptual skills, working at grade level
- Significant gaps in basic math facts, difficulty mastering concepts, below grade level

Recommended placement for the next school year:

- 6th Grade Math** - This course is a follow-up of the basic mathematical skills students learned in the elementary grades. The four basic fundamental operations have been mastered and students are now ready for a more challenging year of computations, equations, and mathematical problems.
  - Mastery of the four arithmetic operations with whole numbers, positive fractions, positive decimals, and positive and negative integers
  - Apply the above knowledge to statistics and probability
  - Understand and apply knowledge of positive and negative integers using real world examples
  - Basic understanding of the concepts of mean, median, and mode of data sets and how to calculate the range
  - Use addition and multiplication of fractions routinely to calculate the probabilities for compound events
  - Conceptually understand and work with ratios and proportions and compute percentages (e.g., tax, tips, interest)
  - Know about  $\pi$  and the formulas for the circumference and area of a circle
  - Use letters for numbers in formulas involving geometric shapes and in ratios to represent an unknown part of an expression
  - Solve one-step linear equations and inequalities
  - Graph points and linear equations in four quadrants of the coordinate plane
- Pre-Algebra** - By the end of this course, students are adept at manipulating numbers and equations and understand the general principles at work.
  - Understand and use factoring of numerators and denominators and properties of exponents
  - Construct an algebraic expression or equation to solve a problem
  - Use algebraic formulas to represent relationships between two or more quantities and to represent properties of geometric figures
  - Know the Pythagorean theorem and solve problems in which they compute the length of an unknown side
  - Compute the surface area and volume of basic three-dimensional objects and understand how area and volume change with a change in scale
  - Make conversions between different units of measurement
  - Know and use different representations of fractional numbers (fractions, decimals, and percent) and are proficient at changing from one to another
  - Increase their facility with ratio and proportion, compute percent of increase and decrease, and compute simple and compound interest
  - Graph linear functions and understand the idea of slope and its relation to ratio
  - Find, use, and interpret measures of center and spread
  - Select, make, and use appropriate graphical representations of data

- Algebra 1** - The focus of this course is on solving and graphing linear and quadratic equations, proportional thinking, and operations on polynomial expressions.
- Identify and use arithmetic properties of subsets of integers and rational, irrational, and real numbers
  - Solve multi-step equations and inequalities, solve application problems involving distance-rate-time and percent mixture
  - Extend understanding of linear equations to include three forms of a linear equation, deriving linear equations, and graphing the region defined by a linear inequality
  - Extend use of absolute value to include solving equations and inequalities
  - Add, subtract, multiply, divide, reduce, and evaluate rational expressions with monomial and polynomial denominators
  - Solve systems of equations and inequalities, and interpret solutions
  - Understand the relationship between parallel and perpendicular lines, and find equations of parallel and perpendicular lines
  - Represent functional relationships using rules, tables, and graphs; relate functions to events in real life; understand and use functional notation; determine whether a relation defines a function
  - Determine the domain of independent variables and the range of dependent variables defined by a graph, a set of ordered pairs, or a symbolic expression
  - Solve quadratic equations by graphing, factoring, completing the square, and by using the quadratic formula; use quadratic equations to solve vertical motion problems
  - Evaluate and graph exponential functions; model real-world situations using exponential functions
- Geometry** - This course is weighted heavily in Euclidean (plane) geometry and logical reasoning. Also covered are basic straightedge-compass constructions, non-Euclidean (three-dimensional) geometry, and trigonometric functions.
- Use axioms and theorems to validate assertions through logical deductions
  - Write formal proofs – including two-column, paragraph, flow, coordinate, and indirect proofs
  - Prove basic theorems about congruent and similar plane figures, parallel lines and transversals, and properties of quadrilaterals
  - Understand and apply the general laws that govern logical reasoning; use counterexamples to disprove conjectures
  - Derive and apply formulas for perimeter, circumference, and area of plane figures, and surface area and volume of three-dimensional figures
  - Understand the effect of a change in dimensions on perimeter, area, and volume
  - Extend ability to classify triangles and polygons applying various theorems
  - Prove theorems about angle relationships in triangles and quadrilaterals using properties of parallel lines and complementary, supplementary, vertical, and exterior angles
  - Use the Pythagorean Theorem and its converse in mathematical and real-world applications
  - Construct elements of geometric figures using a compass and straightedge
  - Use the sine, cosine, and tangent functions for acute angles of right triangles to solve problems of unknown side lengths and angle measures in right triangles
  - Use various drawing techniques, including nets, isometric, orthographic and foundation drawings, to represent solids in two dimensions
  - Expand knowledge of circles to include chords, secants, tangents, inscribed angles, and inscribed and circumscribed polygons
  - Apply knowledge of transformations (reflections, translations, and rotations) to polygons in the coordinate plane, and describe transformations algebraically

I recommend this candidate for admission to MCS:

Enthusiastically    Confidently    With reservations    I do not recommend this candidate

Please check if you would like to speak to an Admissions Committee member.

Please note: although rarely requested, a parent/guardian has the legal right to view their student's file.

Name \_\_\_\_\_ Signature \_\_\_\_\_

Teaching Position \_\_\_\_\_

Daytime Phone \_\_\_\_\_ Email \_\_\_\_\_

*Please mail or fax to the Milpitas Christian School Admissions Office. All responses will remain confidential. Thank you.*