

Dr. Martin Luther King Jr. School's Mathematics Recommendation Guidelines (Grade 5 to 6)

What are all the essential skills/indicators that a student needs prior to entering this class?

Math 6	Math 7	IM
<ul style="list-style-type: none"> • Basic Facts – add, subtract, multiply, divide facts 1-12 without a calculator • Estimate and round with all math concepts (number theory, calculation, area, measurement, probability) • Regroup for addition and subtractions • Organize and analyze data into bar graphs, line graphs, stem and leaf plots • Add/subtract fractions and mixed numbers with like denominators • Identify common multiples and least common multiples • GCF and LCM • Add/subtract/multiply/divide 1-3 digit decimals including money • Inequalities 0 how do you use the symbols to make comparisons between two numbers (greater than, less than, equal to) • Identify positive and negative numbers on a number line • Name geometric figures circle, square, triangle parallelogram, rhombus, rectangle, trapezoid • Use a protractor and compass to measure angles and draw circles • Translate verbal expressions and word problems into mathematical equations • Justify responses 	<ul style="list-style-type: none"> • Determine the mean, median, mode of a set of data consisting of 10 whole numbers. • Translating numbers in word form to standard form and vice versa. • Identifying proper place value from thousandths to millions. • Basic Facts – Adding, Subtracting, Multiplying, Dividing Facts 1-12 without a calculator • Adding/Subtracting/Multiplying/Dividing Fractions and Mixed Numbers with like and unlike denominators including regrouping. • Adding, subtracting, multiplying and dividing positive and negative numbers. • Simplifying fractions to the lowest term. • Finding the least common multiple of two numbers and two fractions. • Inequalities—how do you use the symbols to make comparisons between two numbers? (greater than, less than, equal to) and signs (\leq, \geq, $=$, $<$, $>$) • Key words recognition from word problems (the sum means add, the difference means to subtract, “how many times greater than” means divide, “how much greater than means to subtract or count up, more than, total, etc.) • Using a protractor and compass to measure angles and draw circles and measure the degrees of a circle. • Estimating fractions and mixed numbers to the nearest whole number. 	<ul style="list-style-type: none"> • Adding/Subtracting/Multiplying/Dividing Fractions and Mixed Numbers with like and unlike denominators including simplifying, converting and regrouping • Compare and ordering decimals and fractions. • Number sense including decimals (2.2 is smaller than 22.2) • Integers – All operations without a calculator. • Solving two-step equations. • Plotting points on a coordinate grid and giving the ordered pair for a plotted point. • Rounding decimals to the nearest tenth, hundredth, or thousandth. • Comparing and ordering real numbers (including negative to positive) • Including labels at the end of all their answers for word problems (What does the number represent?) • Solving proportions. • Order of operations with all operations • Measures of Central Tendency (Mean, Median, Mode, Range)

<ul style="list-style-type: none">•	<ul style="list-style-type: none">• Rounding decimals to the nearest tenth and hundredth.• Converting a percent (%) to a decimal and to a fraction and vice versa.• Plotting points on a coordinate grid and giving the ordered pair for a plotted point.• Formulas for the area and perimeter of rectangles, squares, triangles, circles.	
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Dr. Martin Luther King Jr. School's Mathematics Recommendation Guidelines (Grade 6 to 7)


What are all the essential skills/indicators that a student needs prior to entering this class?

Math 7	IM	Algebra I
<ul style="list-style-type: none"> • Determine the mean, median, mode of a set of data consisting of 10 whole numbers. • Translating numbers in word form to standard form and vice versa. • Identifying proper place value from thousandths to millions. • Basic Facts – Adding, Subtracting, Multiplying, Dividing Facts 1-12 without a calculator • Adding/Subtracting/Multiplying/Dividing Fractions and Mixed Numbers with like and unlike denominators including regrouping. • Adding, subtracting, multiplying and dividing positive and negative numbers. • Simplifying fractions to the lowest term. • Finding the least common multiple of two numbers and two fractions. • Inequalities—how do you use the symbols to make comparisons between two numbers? (greater than, less than, equal to) and signs (\leq, \geq, $=$, $<$, $>$) • Key words recognition from word problems (the sum means add, the difference means to subtract, “how many times greater than” means divide, “how much greater than means to subtract or count up, more than, total, etc.) • Using a protractor and compass to measure angles and draw circles and measure the degrees of a circle. • Estimating fractions and mixed numbers to the nearest whole 	<ul style="list-style-type: none"> • Adding/Subtracting/Multiplying/Dividing Fractions and Mixed Numbers with like and unlike denominators including simplifying, converting and regrouping • Compare and ordering decimals and fractions. • Number sense including decimals (2.2 is smaller than 22.2) • Integers – All operations without a calculator. • Solving two-step equations. • Plotting points on a coordinate grid and giving the ordered pair for a plotted point. • Rounding decimals to the nearest tenth, hundredth, or thousandth. • Comparing and ordering real numbers (including negative to positive) • Including labels at the end of all their answers for word problems (What does the number represent?) • Solving proportions. • Order of Operations with all operations • Measures of Central Tendency (mean, median, mode, range) 	<ul style="list-style-type: none"> • Solving one-step equations and two-step equations. • Operations with Fractions - Adding/Subtracting/Multiplying/Dividing Fractions and Mixed Numbers with like and unlike denominators including simplifying, converting and regrouping • Order of Operations up to 5 operations per expression and including all operations. • Integers – All operations without a calculator • Graphing Coordinate points • Combining like terms • Evaluating expressions (replacing the variable) • Translating verbal expressions and word problems into mathematical equations • Key words recognition from word problems (the sum means add, the difference means to subtract, “how many times greater than” means divide, “how much greater than means to subtract or count up, etc.) • Operations with variable inequalities (include dividing by negatives)

<p>number.</p> <ul style="list-style-type: none">• Rounding decimals to the nearest tenth and hundredth.• Converting a percent (%) to a decimal and to a fraction and vice versa.• Plotting points on a coordinate grid and giving the ordered pair for a plotted point.• Formulas for the area and perimeter of rectangles, squares, triangles, circles.		
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Dr. Martin Luther King Jr. School's Mathematics Recommendation Guidelines (Grade 7 to 8)

What are all the essential skills/indicators that a student needs prior to entering this class?

Algebra Prep	Double Period Algebra I	Algebra I	Honors Geometry
<ul style="list-style-type: none"> • Adding, subtracting, multiplying and dividing positive and negative numbers. • Simplifying fractions to the lowest term. • Understanding number lines (positive right, negative left—numbers increase from left to right on a number line.) • Finding equivalent fractions. • Adding/Subtracting/Multiplying/Dividing Fractions and Mixed Numbers with like and unlike denominators including regrouping. • Determining percent of numbers. • Solving proportions. • Translating verbal expressions and word problems into mathematical equations. • Graphing – plotting points on a coordinate grid. • Probability is a part to whole comparison and odds are a part to part comparison. • Finding the area of triangles, parallelograms, circles, and trapezoids • Finding the area of geometric figures using formulas including 	<ul style="list-style-type: none"> • Solving one and two-step equations • Operations with Fractions - Adding/Subtracting/Multiplying/Dividing Fractions and Mixed Numbers with like and unlike denominators including simplifying, converting and regrouping • Order of Operations up to 5 operations per expression and including all operations • Integers – All operations without a calculator • Graphing Coordinate points • Evaluating expressions (replacing the variable) • Translating verbal expressions and word problems into mathematical equations • Combine like terms 	<ul style="list-style-type: none"> • Solving one-step equations and two-step equations. • Operations with Fractions - Adding/Subtracting/Multiplying/Dividing Fractions and Mixed Numbers with like and unlike denominators including simplifying, converting and regrouping • Order of Operations up to 5 operations per expression and including all operations. • Integers – All operations without a calculator • Graphing Coordinate points • Combining like terms • Evaluating expressions (replacing the variable) • Translating verbal expressions and word problems into mathematical equations • Key words recognition from word problems (the sum means add, the difference means to subtract, “how many times greater than” means divide, “how much greater than” means to subtract or count up, etc.) • Operations with 	<ul style="list-style-type: none"> • Slope <ul style="list-style-type: none"> ○ How do you determine the slope of a line segment when given 2 points on the line segment? ○ What is the slope of vertical lines? ○ What is the slope of horizontal lines? ○ What is the slope of parallel lines? ○ What is the slope of perpendicular lines (i.e. the slopes of  lines are negative reciprocals of one another—their product is negative one.) • Solving Systems of equations using <ul style="list-style-type: none"> ○ Substitution ○ Linear combination ○ Graphing • Solving Quadratics

<p>triangles, rectangles, circles, trapezoids, squares, parallelograms—using the heights and not the length of one of the sides.</p> <ul style="list-style-type: none">• Solve one-step equations• Measures of Central Tendency (Mean, Median, Mode, and Range)		<p>variable inequalities (include dividing by negatives)</p>	<p>using</p> <ul style="list-style-type: none">○ Graphing○ Factoring• Quadratic formula
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