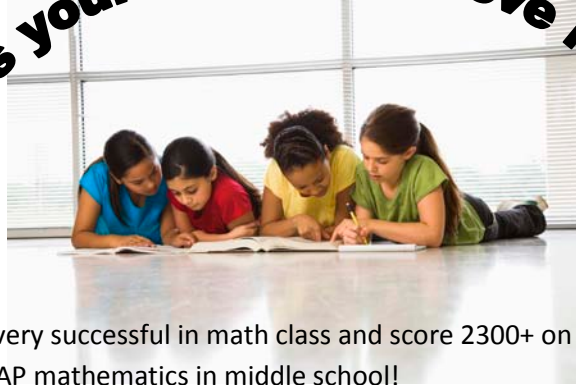


Does your 5th grader love math?



5th grade students who are very successful in math class and score 2300+ on 5th grade Math TAKS are encouraged to consider preAP mathematics in middle school!

Middle School preAP Mathematics is an accelerated program, condensing the three years of middle school math into two years and allowing your student to take Algebra I for high school credit in 8th grade. You may compare the three year program to the two year program in the 2009-10 quad sheets below. The quad sheets describe topics taught by nine weeks in each course.

Grade Level (middle school math in 3 years):

Grade 6

Grade 7

Grade 8

preAP (middle school math in 2 years):

Grade 6 preAP

Grade 7 preAP



MATHEMATICS GRADE 6 PREAP QUAD SHEET

1st Nine Weeks	2nd Nine Weeks	3rd Nine Weeks	4th Nine Weeks
<p>Number Patterns & Functions (13 days)</p> <ul style="list-style-type: none"> • Prime & composite • Divisibility • Exponents • Prime factorizations using exponents • Order of operations • Variables & expressions • Equation <p>Statistics (8 days)</p> <ul style="list-style-type: none"> • Bar & Line Graphs • Interpret Line Graphs • Line Plots • Mean, Median, Mode, & Range • Selecting Appropriate Display <p>Integers (9 DAYS)</p> <ul style="list-style-type: none"> • Ordered Pairs on the Coordinate Plane • Ordering • Adding, Subtracting, Multiplying, & Dividing <p>Decimals (7 days)</p> <ul style="list-style-type: none"> • Modeling • Comparing & ordering • Rounding • Estimating Sums & Differences • Adding & Subtracting (with & without models) 	<p>Decimals (continued) (7 days)</p> <ul style="list-style-type: none"> • Multiplying & Dividing with & without Models <p>Fractions & Decimals (14 days)</p> <ul style="list-style-type: none"> • GCF • LCM • Simplifying Fractions • Mixed Numbers & Improper Fractions • Comparing & Ordering • Writing Decimals as Fractions • Writing Fractions as Decimals (including Repeating) <p>Fraction Operations (10 DAYS)</p> <ul style="list-style-type: none"> • Rounding • Estimating • Adding & Subtracting with models and without 	<p>Fractions (continued) (8 days)</p> <ul style="list-style-type: none"> • Multiplying & Dividing (with & without Models) <p>Ratio, Proportion, & Functions (9 days)</p> <ul style="list-style-type: none"> • Ratios & Rtes • Ratio Tables • Proportions • Solving Proportions • Sequences & Expressions <p>PERCENTS & Probability (10 days)</p> <ul style="list-style-type: none"> • Percents, Fractions, & Decimals • Represent percents with concrete models • Circle graphs • Simple Probability • Sample Space & the Counting Principle • Making Predictions <p>Systems of Measurement (10 days)</p> <ul style="list-style-type: none"> • Customary Measurement: length, Capacity, & Weight • Metric System: Length, Capacity, & Weight • Measures of Time <p>Geometry (8 days)</p> <ul style="list-style-type: none"> • Classify and measure angles • Classify polygons • Identify angle relationships in triangles & quadrilaterals 	<p>Measurement: Perimeter, Area, & Volume (11 days)</p> <ul style="list-style-type: none"> • Area Formulas: Square, rectangle, parallelogram, triangle, trapezoid, circle • Perimeter • Circle & Circumference • Volume of Rectangular Prism <p>After TAKS:</p> <ul style="list-style-type: none"> • Similar & Congruent Figures • 3-D Figures • Area of Complex Figures • Estimating with Percent • Finding the Percent of a Number • Scientific Notation • Experimental Probability • Compound Events • Solving Addition, Subtraction, & Multiplication Equations

MATHEMATICS GRADE 6 ACADEMIC QUAD SHEET

1st Nine Weeks	2nd Nine Weeks	3rd Nine Weeks	4th Nine Weeks
<p>Number Patterns & Functions (13 days)</p> <ul style="list-style-type: none"> • Prime & composite • Divisibility • Exponents • Prime factorizations using exponents • Order of operations • Variables & expressions • Equation <p>Statistics (8 days)</p> <ul style="list-style-type: none"> • Bar & Line Graphs • Interpret Line Graphs • Line Plots • Mean, Median, Mode, & Range • Selecting Appropriate Display • <p>Integers (1 day)</p> <ul style="list-style-type: none"> • Number Line • Represent Data <p>Decimals (8 days)</p> <ul style="list-style-type: none"> • Modeling • Comparing & ordering • Rounding • Estimating Sums & Differences • Adding & Subtracting (with & without models) 	<p>Fractions & Decimals (14 days)</p> <ul style="list-style-type: none"> • GCF • LCM • Simplifying Fractions • Mixed Numbers & Improper Fractions • Comparing & Ordering • Writing Decimals as Fractions • Writing Fractions as Decimals <p>Fraction Operations (11 DAYS)</p> <ul style="list-style-type: none"> • Rounding • Estimating • Adding & Subtracting with models and without 	<p>Ratio, Proportion, & Functions (11 days)</p> <ul style="list-style-type: none"> • Ratios & Rates • Ratio Tables • Proportions • Solving Proportions • Sequences & Expressions <p>Percents & Probability (10 days)</p> <ul style="list-style-type: none"> • Percents, Fractions, & Decimals • Represent percents with concrete models • Circle graphs • Simple Probability • Sample Space & the Counting Principle • Making Predictions <p>Systems of Measurement (10 days)</p> <ul style="list-style-type: none"> • Customary Measurement: length, Capacity, & Weight • Metric System: Length, Capacity, & Weight • Measures of Time <p>Geometry (6 days)</p> <ul style="list-style-type: none"> • Classify and measure angles • Classify polygons • Identify angle relationships in triangles & quadrilaterals 	<p>Measurement: Perimeter, Area, & Volume (11 days)</p> <ul style="list-style-type: none"> • Area Formulas: Square, rectangle, parallelogram, triangle • Perimeter • Circle & Circumference • Volume of Rectangular Prism <p style="text-align: center; color: #800080; font-weight: bold; margin: 10px 0;">TAKS TEST</p> <p>Proportionality through Algebraic Reasoning cont. (8-10 days)</p>

MATHEMATICS GRADE 7 PREAP QUAD SHEET

1 st Nine Weeks	2 nd Nine Weeks	3 rd Nine Weeks	4 th Nine Weeks
<p>ORDER OF OPERATIONS (2-3 DAYS)</p> <p>ALGEBRAIC EXPRESSIONS (2-3 DAYS)</p> <ul style="list-style-type: none"> Properties of Addition and Multiplication (1-2 days) Variables (1-2) <p>INTEGERS (8-10 DAYS)</p> <ul style="list-style-type: none"> Compare and order (1-2 days) Addition, Subtraction, Multiplication, Division (3-4 days) <p>SOLVING EQUATIONS (10-12 DAYS)</p> <ul style="list-style-type: none"> Model solving equations (2 days) Solve one-step equations (2-4 days) <p>RATIONAL #S (9-12 DAYS)</p> <p>--INTEGERS, FRACTIONS, DECIMALS</p> <ul style="list-style-type: none"> Converting between fractions and decimals (1 day) Compare and order integers, +/- fractions, +/- decimals (2-3 days) Addition, Subtraction, Multiplication, Division of Decimals—including estimation, models, and equations (4-5 days) Addition, Subtraction of Fractions—including estimation and models (2-3days) 	<p>RATIONAL #S (9-12 DAYS)</p> <p>--INTEGERS, FRACTIONS, DECIMALS</p> <ul style="list-style-type: none"> Multiplication and Division of fractions—including models, estimation, and equations (6-7 days) <p>TWO-STEP EQUATIONS WITH RATIONAL NUMBERS (2 DAYS)</p> <p>MULTIPLE REPRESENTATIONS (2-3 DAYS)</p> <ul style="list-style-type: none"> Coordinate Graphing (4 Quadrants) (1 day) Tables, Graphs, Equations, Written Descriptions (1-2 days) <p>SEQUENCES (2-3 DAYS)</p> <ul style="list-style-type: none"> Solve for the nth term of a sequence (1 day) Build a table of values, write a rule (1-2 days) <p>RATIOS, PROPORTIONS, AND SIMILARITY (9-12 DAYS)</p> <ul style="list-style-type: none"> Rates and Unit Rates (2-3 days) Dimensional Analysis (2 days) Similarity (2-3 days) Dilations (1 day) Scale Factor & Indirect Measurement (2-3 days) <p>COMPARE AND CONTRAST PROPORTIONAL VS. NON-PROPORTIONAL RELATIONSHIPS (2-3 DAYS)</p>	<p>LINEAR, CIRCULAR AND AREA MODELS FOR PERCENTS (1-2 DAYS)</p> <p>CONVERT & ORDER FRACTIONS, DECIMALS, PERCENTS (1-2 DAYS)</p> <p>PERCENTS (7-10 DAYS)</p> <ul style="list-style-type: none"> % proportions & equations (1-2 days) % of change (1-2 days) Discount, Sales Tax, Commission, Simple Interest (5-6 days) <p>GEOMETRY (4-5 DAYS)</p> <ul style="list-style-type: none"> Characteristics of angles, polygons, solid figures (3 days) Parallel and Perpendicular Lines (1-2 days) <p>TRANSFORMATIONS (2 DAYS)</p> <ul style="list-style-type: none"> Translations, Rotations, Reflections <p>SQUARES & SQUARE ROOTS WITH AND WITHOUT MODELS (1-2 DAYS)</p> <p>PI, CIRCUMFERENCE, AND PERIMETER (2-3 DAYS)</p> <p>AREA OF 2D FIGURES (4-5 DAYS)</p> <p>EFFECTS OF DIMENSIONAL CHANGE (1-2 DAYS)</p> <p>NETS, SURFACE AREA, VOLUME AND APPLICATIONS (8-11 DAYS)</p> <ul style="list-style-type: none"> Nets of Solid Figures, Top, Front, Side Views, Perspective Drawings (2-3 days) Total and Lateral Surface Area (3-4 days) Volume of Solid Figures (3-4 days) 	<p>MEASURES OF CENTRAL TENDENCY (2 DAYS)</p> <ul style="list-style-type: none"> Mean, Median, Mode, Range <p>DATA ANALYSIS AND REPRESENTATION (6-7 DAYS)</p> <ul style="list-style-type: none"> Frequency Table, Line, Bar, & Circle Graphs, Venn Diagram, Histogram, Stem-and-Leaf Plot, Box-and-Whiskers Plot Misleading statistics & sampling <p>PROBABILITY (7-8 DAYS)</p> <ul style="list-style-type: none"> Sample Space, Simple and Compound Experiments, Independent and Dependent Events, Tree Diagram Theoretical, Experimental, Geometric Probability <p>ALGEBRAIC REASONING (8-10 DAYS)</p> <ul style="list-style-type: none"> Scatter plots (2 days) Interpreting Graphs (1-2 days) <p>SCIENTIFIC NOTATION (2-3 DAYS)</p> <p>THE REAL NUMBER SYSTEM (1-2 DAYS)</p> <p>PYTHAGOREAN THM. (3-4 DAYS)</p> <ul style="list-style-type: none"> Use models to demonstrate Pythagorean Thm. (1-2 days) <p>Use Pythagorean Thm. to solve real-world problems (1-2 days)</p> <p>MULTI-STEP EQUATIONS (2 DAYS)</p>

Ongoing emphasis: INTEGRATE PROBLEM SOLVING AND ALGEBRAIC REASONING THROUGHOUT EACH NINE WEEKS

MATHEMATICS GRADE 7 ACADEMIC QUAD SHEET

1st Nine Weeks	2nd Nine Weeks	3rd Nine Weeks	4th Nine Weeks
<p>PATTERNS & RELATIONSHIPS (1 WK)</p> <ul style="list-style-type: none"> • Number and geometric patterns • Exponents • Metric measurements • Order of operations <p>VARIABLES & EQUATIONS (1 WK)</p> <ul style="list-style-type: none"> • Evaluate expressions • Translate verbal to symbolic • Evaluate given solutions • Model solving equations <p>INTEGERS (2 WKS)</p> <ul style="list-style-type: none"> • Compare & order • Absolute value • Models & algorithms of all four operations • Model integer equations <p>FRACTIONS & DECIMALS (1 WK)</p> <ul style="list-style-type: none"> • Prime factorization • GCF & LCM • Simplifying fractions • Conversions • Compare & order <p>DECIMALS (2 WKS)</p> <ul style="list-style-type: none"> • Compare & order • Estimate & round • Models & algorithms of all four operations 	<p>FRACTIONS (3 WKS)</p> <ul style="list-style-type: none"> • Estimation & benchmarks • Models & algorithms of all four operations with mixed numbers <p>ALGEBRAIC REASONING & PATTERNS (1.5 WKS)</p> <ul style="list-style-type: none"> • Coordinate plane • Tables, graphs & functions • Patterns in sequences • Graph linear functions <p>PROPORTIONAL RELATIONSHIPS (1.5 WKS)</p> <ul style="list-style-type: none"> • Rates, ratios & unit rates • Identify, write & solve proportions • Scale factor • Customary measurements and conversions <p>SIMILARITY (1.5 WKS)</p> <ul style="list-style-type: none"> • Similar figures & correspondence • Indirect measurement • Scale drawings & models 	<p>FRACTIONS, DECIMALS & PERCENTS (2 DAYS)</p> <ul style="list-style-type: none"> • Percent models • Conversions • Compare & order <p>PERCENTS (2.5 WKS)</p> <ul style="list-style-type: none"> • Estimation • Percent proportions • Discount, tax & tip • Percent of change <p>STATISTICS & DATA REPRESENTATION (2.5 WKS)</p> <ul style="list-style-type: none"> • Organize & display data • Central tendency and variation • Appropriate displays <p>ANGLES, CIRCLES & POLYGONS (2 WKS)</p> <ul style="list-style-type: none"> • Points, lines & planes • Angle classification • Complementary & supplementary angles • Circle properties • Polygon classification • Translations & rotations <p>PERIMETER, CIRCUMFERENCE & AREA (1.5 WKS)</p> <ul style="list-style-type: none"> • Use appropriate formulas • Irregular figures 	<p>SQUARE ROOTS (2 DAYS)</p> <ul style="list-style-type: none"> • Estimate and solve <p>THREE DIMENSIONAL FIGURES (1.5 WKS)</p> <ul style="list-style-type: none"> • Draw and name • Identify bases • Volume of prisms & cylinders • Construct nets • Use nets to find surface area <p>PROBABILITY (1 WK)</p> <ul style="list-style-type: none"> • Experimental probability • Sample spaces • Counting principle • Tree diagrams • Theoretical probability • Independent & dependent events <p>REVIEW FOR TAKS (1 WK)</p> <p>EQUATIONS (2 WKS)</p> <ul style="list-style-type: none"> • Solving one-step equations • Solving integer equations • Solving two-step equations <p>PROPORTIONALITY/ALGEBRAIC REASONING (1 WK)</p> <ul style="list-style-type: none"> • 1 or 2 cumulative projects (Helicopter Project, Slithering Solids, Perplexing Puzzles, etc.)

Ongoing emphasis: INTEGRATE PROBLEM SOLVING AND ALGEBRAIC REASONING THROUGHOUT EACH NINE WEEKS.

MATHEMATICS GRADE 8 ACADEMIC QUAD SHEET

1st Nine Weeks	2nd Nine Weeks	3rd Nine Weeks	4th Nine Weeks
<p>VARIABLES & ALGEBRAIC EXPRESSIONS (3 DAYS)</p> <ul style="list-style-type: none"> • Order of operations • Substitution <p>INTEGERS & EQUATIONS (2 WKS)</p> <ul style="list-style-type: none"> • Compare and order • Absolute value • Add, subtract, multiply and divide • Solving one-step equations <p>RATIONAL NUMBERS & EQUATIONS (2 WKS)</p> <ul style="list-style-type: none"> • Fraction/decimal conversions • Compare and order • Add, subtract, multiply, divide • Solving one-step equations <p>ALGEBRAIC THINKING (1.5 WKS)</p> <ul style="list-style-type: none"> • Ordered pairs • Graphing on a coordinate plane • Table building from equation • Arithmetic sequences <p>EXPONENTS, IRRATIONALS & PYTHAGOREAN THEOREM (2 WKS)</p> <ul style="list-style-type: none"> • Exponents • Scientific notation • Squares and square roots • Estimating square roots • Pythagorean Theorem 	<p>COMPARE & CONTRAST PROPORTIONAL RELATIONSHIPS (2 WKS)</p> <ul style="list-style-type: none"> • Proportional tables, graphs & equations • Scale factor • Contrast with non-proportional • Ratios & rates • Solving proportions • Unit rates <p>SIMILARITY (1.5 WKS)</p> <ul style="list-style-type: none"> • Similar figures • Dilations • Indirect measurement • Scale models <p>CONNECTING PROPORTIONS TO PERCENT (3 WKS)</p> <ul style="list-style-type: none"> • Linear, circular and area models for percents • Fraction/decimal/percent conversions • Compare & order with fractions & decimals • Finding percent • Finding percent of a number • Percent of increase & decrease • Percent applications (discount, commission, tax & tip) • Simple Interest 	<p>GEOMETRY BASICS (1 WK)</p> <ul style="list-style-type: none"> • Points, lines, planes, angles • Parallel & perpendicular lines • Angles in triangles • Classifying polygons • Congruence <p>TRANSFORMATIONS (1 WK)</p> <ul style="list-style-type: none"> • Translations • Reflections <p>PERIMETER, CIRCUMFERENCE & AREA (1 WK)</p> <p>NETS, SURFACE AREA & VOLUME (3.5 WKS)</p> <ul style="list-style-type: none"> • Draw 3-D figures • Volume • Construct nets • Surface area • Spheres (volume only) • Dimensional change <p>DATA AND STATISTICS (2 WKS)</p> <ul style="list-style-type: none"> • Sampling & data organization • Measures of central tendency • Variability • Box & whisker plots • Data displays • Misleading graphs • Scatter plots • Best representation of data 	<p>PROBABILITY (2 WKS – BEGINS IN 3RD NINE WEEKS)</p> <ul style="list-style-type: none"> • Simple probability • Experimental probability • Simulations • Theoretical probability • Independent/dependent events • Making predictions <p>REVIEW FOR TAKS (1 WK)</p> <p>MULTI-STEP EQUATIONS (1.5 WKS)</p> <ul style="list-style-type: none"> • Model with algebra tiles • Solve without tiles • Combine like terms • Distributive property • Variables on both sides <p>INEQUALITIES (1 WK)</p> <ul style="list-style-type: none"> • Graphing inequalities • Solving one-step inequalities <p>ALGEBRAIC REASONING (2 WKS)</p> <ul style="list-style-type: none"> • Cross-Country Cyling • Park Path Design • Movin’ On Down the Line • Movin’ With Technology • Interpreting graphs

Ongoing emphasis: INTEGRATE PROBLEM SOLVING AND ALGEBRAIC REASONING THROUGHOUT EACH NINE WEEKS.