

# Middle School

IQ Learning offers a comprehensive Math and ELA program for both elementary and middle school students. The program is divided into 5 levels: L1 through L5.

L1 and L2 are at the Elementary school Grade 4 and 5 levels while L3 through L5 are for the Middle school grades 6 through 8 students. At the end of level 5, students should be well prepared to take up algebra, geometry, and other advanced math courses in high school.

Each level not only meets but also exceeds the standards recommended by the Fort Bend ISD and the Texas Board curricula. Students may advance to any of the L1 - L5 levels depending on their performance at IQ Learning.

- Math
- Algebra 1
- Geometry (High School credit)
- ELA
- Science

## HOW IT WORKS

Students take our Assessment Test to join the program. Depending on their performance in the test, they are assigned to one of the levels. Students are taught through classroom style lectures and hands-on practice worksheets. The students' progress is monitored on a continuous basis. Whenever the student shows sufficient progress, s/he is recommended to the next level.

For more information about our reading programs [click here](#).

## OUR MATH CURRICULUM

### LEVEL 3 (GRADE 6)

Ratios and proportions

Word problems on ratios and proportions

Percentages and their word problems

Word problems combining mixtures, percentages, fractions, ratio and proportions

Definitions of monomials, binomials, trinomials and polynomials from terms

Powers and exponents

Rules for multiplying and dividing exponents of numbers  
Exponents and powers of variables  
Linear relations between variables  
Independent and dependent variables  
Setting up linear relationships from charts and word problems  
Drawing graphs of linear relationships  
Drawing triangles, quadrilaterals and polygons using protractors  
Angle properties of polygons  
Parallel lines and transversals  
Probability – Word problems involving addition and multiplication of probabilities  
Order of operations – PEMDAS involving fractions, decimals and mixed numbers  
Fractions involving mixed numbers, decimals and whole numbers  
Ladder fractions  
Simple geometric and angle properties of circles  
Draw bar graphs and circle graphs  
Patterns among numbers  
Critical thinking that combines several math skills

## LEVEL 4 (GRADE 7)

Solve linear equations involving addition, subtraction multiplication and division of variables and real numbers  
Definitions of integers, real numbers  
Properties of numbers using variables (associativity, commutativity, distributive)  
Reciprocal of numbers  
Reciprocals of fractions  
Division of fractions means multiplying by reciprocals  
Simplify polynomial expressions using associative, commutative and the distributive laws  
Division of unlike terms and variables  
Powers and exponent rules using variables  
Simplify expressions using power rules, exponents and the associative, commutative and the distributive laws  
Relate transformations of coordinates to geometrical operations of translations, reflections and inversions on graphs  
Equations of straight lines using slopes and intercepts  
Quadrilaterals, circles and their geometric properties like perimeter and area  
Word problems on the properties of 2-d polygons and circles  
Surface areas and volumes of solids  
Sets, Union and Intersection of sets  
Solving probability using sample spaces and set concepts

Geometry: Congruence and similarity properties of triangles properties of quadrilaterals and parallelograms

Word problems combining all the skills above

## LEVEL 5 (GRADE 8)

Definitions of rational numbers, integers, fractions and decimals

Associative, commutative and other algebraic properties using variables

Simplify rational expressions of variables

Irrational numbers: Calculating square roots through factoring and division

Word problems involving square roots

Fractional exponents on numbers and variables

Use of proportions in geometry (similar figures), mixture and other word problems

Set up linear equations to solve rates, work and other word problems  
Word problem applications of Pythagorean theorem

Understand solid figures by drawing the figures and their projections

Surface areas and volumes of cylinders, cones, prisms and pyramids

Word problems on surface areas and volumes of solid shapes

Central tendencies (mean, mode and median)

Word problems based on central measures

Drawing Scatter plots and understanding them

More complicated cases of probability: Dependent and independent events

Solve linear and quadratic equations

Set up and solve word problems based on linear and quadratic equations