

# 8th Grade Math - What Your Child Will Learn This Year

## 1st Nine Weeks

### Unit 1 - Value and Magnitude of Rational Numbers

Your child will convert standard numbers to Scientific Notation, and vice versa.  
(8.2C)

Your child will classify real numbers on a Real Number Venn Diagram. (8.2A)

Your child will approximate irrational numbers. (8.2B)

Your child will compare and order real numbers on a number line. (8.2D)

### Unit 3 - One Variable Equations, Inequalities, and their Applications

Your child will model and solve one-variable equations with variables on both Sides. (8.8C)

Your child will write one-variable equations and inequalities with variables on both sides. (8.8A)

Your child will write real-world problems when given a one-variable equation or inequality with variables on both sides. (8.8B)

### Unit 8 - Angle & Triangle Relationships Involving Real Numbers

Your child will understand & find the different angles formed when parallel lines are cut by a transversal. (8.8D)

Your child will find the missing interior angle of a triangle. (8.8D)

Your child will find the exterior angle of a triangle using the Exterior Angle Theorem. (8.8D)

Your child will use models and diagrams to explain the Pythagorean Theorem. (8.6C)

Your child will use the Pythagorean Theorem & its converse to solve problems.  
(8.7C)

Your child will determine the distance between two points on a coordinate plane using the Pythagorean Theorem. (8.7D)

## 2nd Nine Weeks

(Unit 8 will be completed during the first part of this 9-weeks)

### Unit 7 - Transformational Geometry

Your child will translate figures on a coordinate plane & write an algebraic representation (rule) of that translation. (8.10C)

\_\_\_\_\_ Your child will rotate figures on a coordinate plane & write an algebraic representation (rule) of that rotation. (8.10C)

Your child will reflect figures on a coordinate plane & write an algebraic representation (rule) of that reflection. (8.10C)

Your child will dilate figures on a coordinate plane & write an algebraic representation (rule) of that dilation.

Your child will know which transformation preserves congruence & orientation  
And which one does not (8.10A&B)

Your child will find the perimeter and area of a dilated figure. (8.10D)

Your child will determine the scale factor of a dilated figure. (8.3C)

Your child will use the scale factor to find the missing side of a dilated figure.  
(8.3C)

### Unit 9 - Measurement of Three-Dimensional Figures

Your child will determine the lateral and total surface area of rectangular prisms, triangular prisms, and cylinders. (8.7B)

Your child will determine the volume of cylinders, cones, and spheres (8.7A)

Your child will describe the volume formula of a cylinder (8.6A)

Your child will model the relationship between the volume of a cone & cylinder.  
(8.6B)

### 3rd Nine Weeks

#### Unit 4 - Developing an Understanding of Slope & Y-Intercept

Your child will use similar right triangles on a coordinate plane to prove that the rate of change is the same for any two points on the same line (8.4A)

Your child will determine the rate of change (slope) and y-intercept from graphs and tables (8.4C)

#### Unit 5 - Proportional/Non-Proportional Functions

Your child will graph proportional relationships, and understand that unit rate in a proportional relationship is the same as the slope. (8.4B)

Your child will represent linear, proportional relationships with tables, graphs, and equations in the form  $y=kx$ . (8.5A)

Your child will represent linear, non-linear relationships with tables, graphs, and equations in the form  $y=mx+b$ , where  $b \neq 0$ . (8.5B)

Your child will solve problems involving direct variation. (8.5E)

Your child will be able to distinguish between proportional and non-proportional relationships using tables, graphs, and equations. (8.5F)

Your child will identify functions using sets of ordered pairs, tables, graphs, and mappings. (8.5G)

Your child will identify examples of proportional and non-proportional functions from real-world and mathematical problems. (8.5H)

Your child will identify and check the solution to two graphed equations. (8.9A)

#### Units 2 & 6 - Statistics with Univariate and Bivariate Data

Your child will compare bivariate sets of data from a graph (scatterplot) that suggest a linear relationship, with bivariate sets of data that do not suggest a linear relationship. (8.5C)

Your child will use a trend line on a scatterplot to make predictions. (8.5D)

Your child will write an equation in the form  $y=mx+b$  from tables, graphs, and verbal descriptions. (8.5I)

Your child will construct a scatterplot and describe it as linear, non-linear, and no association. (8.11A)

Your child will determine the Mean Absolute Deviation from a set of data. (8.11B)

Your child will generate a random sample that represents the given population, (8.11C)

## 4th Nine Weeks

### Unit 10 - Personal Financial Literacy

Your child will compare how interest rate and loan length affect the cost of credit in real-world problems. (8.12A)

Your child will calculate the total cost of repaying a loan with various interest rates and over different periods of time. (8.12B)

Your child will explain how small amounts of money invested regularly, including money saved for college and retirement, grow over time. (8.12C)

Your child will calculate and compare simple and compound interest. (8.12D)

Your child will identify and explain the advantages and disadvantages of different payment methods. (8.12E)

Your child will analyze situations to determine if they represent financially responsible decisions, and identify the benefits of financial responsibility, as well as the cost of financial irresponsibility. (8.12F)

### Unit 11 - STARR Review

Your child will review the major concepts that were taught this year to help prepare them for the upcoming STAAR test.

### Unit 12 - Intro to Algebra

Your child will go over a few concepts that will help prepare them for the start of Algebra.