

Questions

Questions for your child's teacher:

- ◆ What tests are required of my child?
- ◆ How do I get my child tested or evaluated when struggling?
- ◆ When children are absent or tardy, who will call the parents?
- ◆ Prior to getting a poor progress report or report card how will you notify me if my child is struggling or not completing the work?
- ◆ My child is having trouble with math. Where can I get additional help?
- ◆ What is your classroom policy?
- ◆ What are the course expectations for my child?

Activities for Home

What can I do to help my child

- ◆ Contact the teacher/school to schedule an appointment
- ◆ Monitor your child's progress (check homework, missing assignments, etc.)
- ◆ Provide homework space-appropriate light, space, and a quiet place.
- ◆ Be sure your child gets plenty of rest.
- ◆ Have your child create a budget
- ◆ Open up a bank account for your child and encourage your child to manage their money.

A Message from the CMSD


~School Parent Organization~

Dear parents,

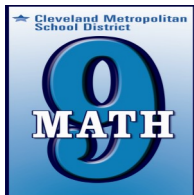
One of the most important things you can give your child is your time. Becoming actively involved in your child's education provides the encouragement your child needs to become successful. A parent brings about a cohesive team.

NOTES:

★ Cleveland Metropolitan
School District



MATH



What should my ninth grader learn about Math?

Number, Number Sense and Operations

- ◆ Use scientific notation to express large numbers and numbers less than one.
- ◆ Identify subsets of the real number system.
- ◆ Apply properties of operations and the real number system, and justify when they hold for a set of numbers.
- ◆ Connect physical, verbal and symbolic representations of integers, rational numbers and irrational numbers.
- ◆ Compare, order and determine equivalent forms of real numbers.
- ◆ Explain the effects of operations on the magnitude of quantities.
- ◆ Estimate, compute and solve problems involving real numbers, including ratio, proportion and percent, and explain solutions.
- ◆ Find the square root of perfect squares, and approximate the square root of non-perfect squares.
- ◆ Estimate, compute and solve problems involving scientific notation, square roots and numbers with integer exponents.

Measurement

- ◆ Solve increasingly complex non-routine measurement problems and check for reasonableness of results.
- ◆ Use formulas to find surface area and volume for specified three-dimensional objects accurate to a specified level of precision.
- ◆ Apply indirect measurement techniques, tools and formulas, as appropriate, to find perimeter, circumference and area of circles, triangles, quadrilaterals and composite shapes, and to find volume of prisms, cylinders, and pyramids.

- ◆ Use proportional reasoning and apply indirect measurement techniques, including right triangle trigonometry and properties of similar triangles, to solve problems involving measurements and rates.
- ◆ Estimate and compute various attributes, including length, angle measure, area, surface area and volume, to a specified level of precision.
- ◆ Write and solve real-world, multi-step problems involving money, elapsed time and temperature, and verify reasonableness of solutions.

Geometry and Spatial Sense

- ◆ Formally define geometric figures.
- ◆ Describe and apply the properties of similar and congruent figures; and justify conjectures involving similarity and congruence.
- ◆ Recognize and apply angle relationships in situations involving intersecting lines, perpendicular lines and parallel lines.
- ◆ Use coordinate geometry to represent and examine the properties of geometric figures.
- ◆ Draw and construct representations of two and three-dimensional geometric objects using a variety of tools, such as straightedge, compass and technology.
- ◆ Represent and model transformations in a coordinate plane and describe the results.
- ◆ Prove or disprove conjectures and solve problems involving two and three-dimensional objects represented within a coordinate system.
- ◆ Establish the validity of conjectures about geometric objects, their properties and relationships by counterexample, inductive and deductive reasoning, and critiquing arguments made by others.
- ◆ Use right triangle trigonometric relationships to determine lengths and angle measures.

Patterns, Functions and Algebra

- ◆ Generalize and explain patterns and sequences in order to find the next term and the n th term.
- ◆ Identify and classify functions as linear or nonlinear, and contrast their properties using tables, graphs or equations.
- ◆ Translate information from one representation (word, tables, graph or equation) to another representation (words, table, graph, or equation).
- ◆ Use table, graphs, expressions, functions and inequalities, to model and solve problem situations.
- ◆ Solve and graph linear equations and inequalities.
- ◆ Represent and model transformations in a coordinate plane and describe the results.
- ◆ Prove or disprove conjectures and solve problems involving two and three-dimensional objects represented within a coordinate system.
- ◆ Establish the validity of conjectures about geometric objects, their properties and relationships by counterexample, inductive and deductive reasoning, and critiquing arguments made by others.
- ◆ Model and solve problem situations involving direct and inverse variation.

Data Analysis and Probability

- ◆ Create, interpret, and use graphs to describe data in a variety of methods.
- ◆ Evaluate graphs to determine which is a more appropriate representation.
- ◆ Compare the mean (average), median (number that lies in the center), and mode (frequency of a number) for a set of data and tell which best represents that data.
- ◆ Determine how valid claims and predictions about a set of data are based on how the data was collected.
- ◆ Analyze and compare functions and their graphs using attributes, such as rates of change, intercepts and zeros.
- ◆ Construct convincing arguments based on analysis of data and interpretation of graphs.
- ◆ Describe sampling methods and describe how the sampling method chosen effects the sample.

- ◆ Use continuing techniques to determine the total number of options and possible outcomes.
- ◆ Design an experiment to test a theoretical probability, and record and explain results.
- ◆ Compute possibilities of various mathematical events.
- ◆ Make predictions based on theoretical probabilities and experimental results.

Mathematical Processes

- ◆ Formulate a problem or mathematical model in response to a specific need or situation, determine information required to solve the problem; choose method for obtaining this information, and set limits for acceptable solution.
- ◆ Apply mathematical knowledge and skills routinely in other content areas and practical situations.
- ◆ Recognize and use connections between equivalent representations and related procedures for a mathematical concept; e.g., zero of a function and the x -intercept of the graph of the function, apply proportional thinking when measuring, describing functions, and comparing probabilities.
- ◆ Apply reasoning processes and skills to construct logical verifications or counter-examples to test conjectures and to justify and defend algorithms and solutions.
- ◆ Use a variety of mathematical representations flexibly and appropriately to organize, record and communicate mathematical ideas.
- ◆ Use precise mathematical language and notations to represent problem situations and mathematical ideas.
- ◆ Write clearly and coherently about mathematical thinking and ideas.
- ◆ Locate and interpret mathematical information accurately, and communicate ideas, processes and solutions in a complete and easily understood manner.