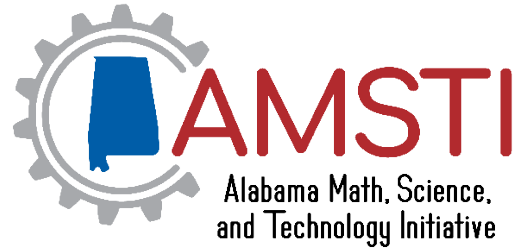


Family Guide for Student SUCCESS

Geometry with Data Analysis



FAMILIES + SCHOOLS = STUDENT SUCCESS

Parents and family are a child's first teachers in life and have valuable insights into the needs, strengths, and interests of their child. The collaboration of caregivers and educators is vital in guiding each child toward success. The Family Guide for Student Success outlines what your child should learn in Geometry. You can encourage your child's academic growth by reinforcing classroom activities at home. The Family Guide for Student Success outlines the critical content that all students should know and be able to do at the end of Geometry. The achievement of the expectations will help your child meet the assessment standards established by our state. It is only through your support and active participation in your child's education that we form a partnership for success for all the children in Alabama.

WHY ARE STANDARDS IMPORTANT?

- They help ensure that all students, no matter where they live, are prepared for success in college and the workforce.
- Standards provide a clear roadmap of learning for teachers, parents, and students.
- Having clearly defined goals helps families and teachers work together to ensure that students succeed.
- They also will help your child develop critical thinking skills that will prepare him or her for college and career.

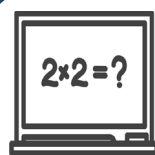
GEOMETRY CONTENT PRIORITIES

This guide provides an overview of what your child will learn by the end of Geometry. If your child is meeting the expectations outlined in these standards, he or she will be well prepared for future High School courses. In Geometry, instructional time should focus on four essential areas, all of which have equal importance:



NUMBER and QUANTITY

Your child can work with rational and irrational numbers within algebraic expressions to solve problems.



ALGEBRA and FUNCTIONS

Your child can formulate, analyze, and solve equations and functions and explain the relationship between quantities.



STATISTICS and PROBABILITY

Your child can represent data and use statistical reasoning about data to draw conclusions and make predictions.



GEOMETRY and MEASUREMENT

Your child can determine the volume and 3-D figures and use transformations to verify congruence and similarity of geometric figures.

MATH @ HOME

Have you ever heard this phrase from your child before about math, "When will I ever use this?" The more they can make a connection between math & the real world, the more they will value it. Below you will find a few ideas to showcase how your child can relate the Geometry concepts he/she is learning at school and apply them at home in everyday situations.

Number and Quantity

- Find mathematical information in the news or magazines and create problems. Example: According to an article in Runners' World magazine:

On average the human body is more than 50 percent water [by weight]. Runners and other endurance athletes average around 60 percent. This equals about 120 soda cans' worth of water in a 160-pound runner!

Investigate their calculation. Approximately how many soda cans' worth of water are in the body of a 160-pound runner? What unprovided information do you need to answer this question?

Algebra and Functions

- Create a story problem with your child. For example: Sally was riding her bike to practice. She stopped for a few minutes to get a snack. She then continued at a slower rate than before until she got to practice. Graph Sally's trip.
- Sherry sold tickets for the dance. After the dance was over, she noticed a dollar on the ground. The price of tickets for the dance was 1 ticket for \$5 (for individuals) or 2 tickets for \$8 (for couples). Sherry looked inside the cash box and found \$200 and ticket stubs for the 47 students in attendance. Does the dollar belong inside the cash box or not?

Data Analysis, Statistics, and Probability

- Have your child look for ways in media (newspapers, magazines, websites, etc.) in which data is displayed. Have conversations about what the data means. Also, discuss any possible biases that might have occurred when the data was collected such as:
 - Was enough data collected to be meaningful?
 - Was the data that was collected truly random?
 - Was the data presented in a way that seemed to intentionally encourage certain conclusions?

Geometry and Measurement

- Take a piece of string and a circular can or jar at home. Have your student measure the item with the string. Have them use their measurement to determine the circumference, area, & volume of the item.

WHAT IS AMSTI?

The Alabama Math, Science, and Technology Initiative, commonly referred to as AMSTI, is the Alabama Department of Education's initiative to improve STEM teaching & learning statewide. Its mission is to support Alabama educators and students in learning STEM by doing STEM. Check us out by scanning the QR Code.



“Education is the most powerful weapon which you can use to change the world.”
- Nelson Mandela

HOMEWORK HELP



AMSTI

Quick links for Family Resources to do math at home.

www.amsti.org/912-math-student-family



Khan Academy

Instructional Math Videos with Interactive Guided Practice

www.khanacademy.com



Math Help!

Instructional Math Videos with Interactive Guided Practice & Self Assessment

www.mathhelp.com



DESMOS

Free Graphing or Scientific Calculator

www.desmos.com



GeoGebra

Free Graphing, Scientific, 3D, & CAS Calculator

www.geogebra.org