Mathematics
Grade 7AAC Math Public Overview

1st 9 Weeks
Assessments MAP Growth Math: September 2, 2026 – September 3, 2026
What are we learning? **How can I help at home?**

Grade 8 Module 1: Transforming Geometric Objects
Grade 7 Module 5 Topic 1: Angle Relationships

In *Transforming Geometric Objects and Angle Relationships*, students develop a strong understanding of how shapes behave when they are moved, resized, and analyzed on the coordinate plane. They explore how transformations—such as sliding, flipping, and rotating—affect figures and learn that these movements preserve size and shape, leading to an understanding of congruence. Building on this, students investigate how shapes can be enlarged or reduced using scale factors, recognizing that figures can maintain the same shape while changing size (similarity) and identifying proportional relationships between corresponding parts. Throughout the module, students apply these ideas to explain geometric relationships, including angle relationships in triangles, angle pair relationships, and when lines intersect or run parallel. Emphasis is placed on hands-on exploration, visual reasoning, and using algebraic rules to describe changes, allowing students to justify and connect geometric concepts to both mathematical reasoning and real-world situations.

Essential Question:
How can we describe, use, and apply transformations to understand how shapes are related and how geometric relationships are formed?

Timeline: August 11 – October 1
Essential Standards: 8.3C, 8.10C

Link to TEKS/Parent Guide:

- Texas Essential Knowledge and Skills for Mathematic Grade 8
- Texas Essential Knowledge and Skills for Mathematic Grade 7
- Topic Family Guides aligned to the module are available through your students' digital access and can be found in Student Topic Resources.

Content: Students …

- Apply and describe transformations (slide, flip, turn) to move shapes on a coordinate plane, including algebraic representations.
- Identify and justify when figures are congruent and explain how one figure maps onto another.
- Use scale factors to resize figures and determine when shapes are similar.
- Analyze relationships between side lengths and angles to solve geometric problems.
- Use mathematical reasoning and algebraic representations to explain patterns and relationships in geometry.

At-Home Connection:

- **Explore movement of objects:** Have your child describe how an object moves when you slide it across a table, flip it over, or rotate it (like turning a book). Ask them what stays the same.
- **Resize something at home:** Ask your child to compare a picture on a phone to a printed version or zoom in/out on an image. Talk about how it changes size but keeps the same shape (similarity and scale factor).
- **Look for angles and lines in the real world:** While driving or walking, look at streets or intersections. Ask your child to identify parallel lines or types of angles (like corners of signs or buildings) and describe how they are related.

Grade 8 Module 2: Developing Function Foundations *(Continues in 2nd 9 Weeks)*

In *Developing Function Foundations*, students learn how different quantities are related and how those relationships can be shown using tables, graphs, and equations. They begin by connecting what they know about ratios and proportions to lines on a graph, helping them understand how one quantity changes compared to another. Students then explore linear relationships more deeply, including how to find and explain the rate of change (slope) and starting value in real-world situations. By the end of the module, students can recognize patterns, write equations for relationships, and understand how these ideas connect to functions they will study in future math courses.

Essential Question:

How can we represent and use relationships between two quantities to understand and predict real-world situations?

Timeline: October 2 – November 11
Essential Standards: 8.3C, 8.4B, 8.4C, 8.5G, 8.5I, 8.10C
Link to TEKS/Parent Guide:

- Texas Essential Knowledge and Skills for Mathematic Grade 8
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Content: Students …

- Connect proportional relationships to lines and linear equations.
- Understand slope as a rate of change and explain why it is constant using models like similar triangles.
- Write and interpret linear equations representing mathematical and real-world situations.
- Analyze and compare linear relationships using tables, graphs, and equations.
- Identify and describe functions and determine whether a relationship has one output for each input.

At-Home Connection:

- **Compare shopping options:** Have your child compare two pricing options (like online vs. in-store) and decide which is a better deal by looking at cost patterns.

- **Track real-life rates:** Ask your child to measure something like distance over time (walking, biking, driving) and describe how fast it is changing.
- **Analyze starting amounts:** Look at situations like savings accounts or phone plans and discuss how the starting amount and change over time affect the total.

2nd 9 Weeks

Assessments

PSAT October 27, 2026

What are we learning?
How can I help at home?

Grade 8 Module 2: Developing Function Foundations *(Continued)*

See 1st 9 weeks for details

Grade 8 Module 3 Part A: Data Data Everywhere *(Continues in 3rd 9 Weeks)*

In *Data Data Everywhere*, students learn how to look at relationships between two sets of data (for example, hours studied and test scores). They use graphs called scatterplots to spot patterns and draw trend lines (lines of best fit) to make predictions.

Essential Question:

How can we use patterns in data to understand relationships between two variables and make predictions about real-world situations?

Timeline: November 12 – December 1
Essential Standards: 8.5D, 8.5I
Link to TEKS/Parent Guide:

- Texas Essential Knowledge and Skills for Mathematic Grade 8
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Content: Students …

- Analyze relationships between two sets of data using graphs (scatterplots)
- Identify patterns and describe how variables are related
- Use trend lines and equations to model data and make predictions

At-Home Connection:

- **Analyze Sports or Game Data:** Look at sports statistics (points scored vs. playing time) and talk about whether more practice or time leads to better performance.
- **Make Predictions from Data:** Use real-life situations like weather trends or spending habits to make predictions (e.g., "If this pattern continues, what might happen next week?").

3rd 9 Weeks

Assessments

MAP Growth Math: January 20, 2027 – January 21, 2027

Grade 8 Module 3 Part A: Data Data Everywhere *(Continued)*

See 2nd 9 weeks for details

Grade 8 Module 4: Modeling Linear Equations

In *Modeling Linear Equations*, students build on prior knowledge equations to represent and solve real-life problems using more complex equations and inequalities.

Essential Question:

How can equations and systems of equations be used to model and solve real-world problems?

Timeline: December 2 – December 18
Essential Standards: 8.5I, 8.8C
Link to TEKS/Parent Guide:

- Texas Essential Knowledge and Skills for Mathematic Grade 8
- Topic Family Guides aligned to the module are available through your students' digital access and can be found in Student Topic Resources.

Content: Students …

- Write equations and inequalities to represent real-world situations.
- Solve equations using multiple strategies.
- Describe the meaning of solutions in real-world situations.
- Use graphs of systems of equations to determine and interpret the meaning of the intersection of the two graphed lines.

At-Home Connection:

- **Compare Costs:** Have your child compare two shopping options (like two stores or plans) by writing simple equations to determine when the total cost would be the same
- **Solve Real-Life Scenarios:** Ask your child to create and solve an equation from a real situation at home (such as budgeting allowance or splitting costs)
- **Find "Break-Even" Points:** Work with your child to compare two options (like buying vs. renting) and determine when they cost the same using a graph.

What are we learning?
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Grade 8 Module 5: Applying Powers *(Continues in 4th 9 weeks)*
Grade 7 Module 4: Analyzing Populations and Probabilities
Grade 8 Module 3 Part B: Data Data Everywhere
Grade 7 Module 5 Topic 2: Area, Surface Area, and Volume

In these modules, students strengthen their mathematical reasoning by applying number sense, geometry, measurement, probability, and data analysis skills to real-world situations. They learn to use powers, formulas, and estimation strategies to solve problems involving large and small numbers, distance, growth through interest, and the dimensions of three-dimensional objects. Students extend their understanding of geometry by finding the area of complex shapes and calculating the surface area and volume of prisms, pyramids, cylinders, cones, and spheres. They also explore probability by describing and calculating the likelihood of single and combined events, and developing data literacy by collecting, analyzing, and interpreting data to make predictions about larger populations.

Throughout these modules, students use mathematical tools, models, and real-world contexts to deepen their understanding and apply their learning in meaningful ways.

Essential Question:

How can we use mathematical tools, formulas, geometry, probability, and data analysis to understand, model, and make informed decisions about real-world situations?

Timeline: January 6 – May 27
Essential Standards: 7.6G, 7.6H, 7.6I, 7.9A, 7.9C, 8.2D, 8.7A, 8.7B, 8.7C, 8.12D
Link to TEKS/Parent Guide:

- **Texas Essential Knowledge and Skills for Mathematic Grade 8**
- **Texas Essential Knowledge and Skills for Mathematic Grade 7**
- Topic Family Guides aligned to the module are available through your students' digital access and can be found in Student Topic Resources.

Content: Students …

- Estimate and compare numbers, including placing them on a number line
- Solve equations involving squares and square roots
- Read, write, and compare numbers in scientific notation
- Use the Pythagorean Theorem to find distances and solve problems
- Apply the Pythagorean Theorem on the coordinate plane
- Calculate and compare simple and compound interest
- Analyze how interest rates and time impact financial decisions
- Break apart and combine shapes to calculate the area of complex figures.
- Use nets and models to determine the surface area of three-dimensional shapes.
- Explore and apply formulas to calculate the volume of prisms and pyramids.
- Calculate volume and surface area of cylinders, cones, and spheres in real-world contexts
- Explore how likely events are and test their predictions.
- Organize and represent possible outcomes in different ways.
- Use models and reasoning to calculate and compare probabilities.
- Solve problems involving simple and compound events.
- Collect, analyze, and interpret data from samples.
- Use data to compare groups and make real-world predictions.

At-Home Connection:

- **Compare savings options:** Have your child compare two savings accounts—one with simple interest and one with compound interest—and decide which grows money faster over time.
- **Find distances around you:** Have your child use the Pythagorean Theorem to estimate distances (such as the diagonal across a room or a rectangular space).
- **Calculate space in your home:** Work together to calculate to total area of your home.
- **Build and explore 3D shapes:** Use paper models, everyday containers, or boxes to create and examine prisms, pyramids, cylinders, cones, and spheres. Discuss how much space each shape can hold (volume) and how much material would be needed to cover its outside surfaces (surface area).
- **Play and predict games:** Have your child play a game with dice, coins, or cards and predict the chances of certain outcomes, then test their predictions by playing multiple times.

- **Analyze everyday chances:** Ask your child to estimate the probability of everyday events (rain, making a shot in a game, choosing a certain item) and explain their reasoning.
- **Use data in real life:** Look at real data together, such as sports statistics or survey results, and have your child explain what the data shows and make predictions.

4th 9 Weeks
Assessments STAAR (April 26 – April 28) MAP Growth Math: May 5, 2027 – May 6, 2027
Module 5: Applying Powers *(Continued)* *See 3rd 9 weeks for details*