



MATHEMATICS

GRADE 7

By the end of seventh grade, students will have had an opportunity to engage with the core concepts listed below.

- Rational Number Operations
 - Practice adding, subtracting, multiplying, and dividing whole numbers, fractions, and decimals
 - Use these skills to solve real-life problems with money, measurements, or other contexts
 - Simplify math expressions by following the correct order of operations
- Proportions
 - Solve problems using ratios, rates, proportions, and percentages (like sale prices or recipe conversions)
 - Use scale drawings such as maps or blueprints to find the actual size of an object
- Probability & Statistics
 - Create and interpret scatter plots to see relationships between two sets of data
 - Calculate probabilities of events, such as rolling a 3 or a 4 on a die versus rolling a 3 and then a 4
- Expressions & Equations
 - Solve equations and inequalities by combining like terms and using properties like the distributive property
 - Write equations to represent real-life situations, such as $20h = 500$ to find hours worked at \$20 per hour to earn \$500
 - Graph linear equations and solve systems of equations (two equations at once) to find solutions
- Geometry
 - Calculate the volume of cones and cylinders
 - Find the surface area of different 3D shapes, such as boxes and prisms
 - Explore transformations—moving, flipping, rotating, or resizing shapes



QUESTIONS TO ASK YOUR STUDENT

- "What new concepts are you learning right now in math? Which do you feel that can you do successfully?"
- "Where do you feel you need additional challenge and/or support?"
- "Have you checked in with your math teacher to ask for the support you'd like? How do you plan to do that?"
- "When you're solving a problem as a group, how do you make sure everyone's ideas get heard? How do you choose a strategy to use?"



WAYS TO CHALLENGE THEIR THINKING

- Provide problems that involve performing operations with rational numbers (integers, fractions, and decimals) in real-world contexts.
- Present problems that involve proportions, rates, and percentages in more complex and real-world applications like cooking, shopping, and budgeting.
- Provide complex probability problems and analyze real life data sets (sports, climate, test scores, etc.).
- Create problems that involve calculating areas, volumes, and working with the geometry of circles and 3D shapes in real life using items and settings such as cans, boxes, rooms, etc.