



MATHEMATICS

GRADE 6

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

- Ratios and Rates
 - Solve problems involving proportional relationships. For example, if it took 7 hours to mow 4 lawns, then how many lawns could be mowed in 35 hours at that rate?
- Rational Number Operations
 - Fluently work with fractions, including dividing fractions and solving related word problems; flexibly convert among fractions, decimals, and percentages ($\frac{1}{3}$, .33, 33%). For example, how wide is a rectangular strip of land with length $\frac{3}{4}$ mile and area $\frac{1}{2}$ square mile?
- Integers
 - Multiply, divide, add and subtract positive and negative numbers to solve problems in context using strategies and visual models.
 - Understand the ordering and absolute values of positive and negative numbers.
- Expressions & Equations
 - Write and solve one-step equations.
 - Solidify understanding of order of operations including expressions with exponents.
- Geometry
 - Reason about relationships between shapes to determine areas of composite shapes and circles as well as surface area and volume of prisms.
- Statistics and Probability
 - Learn to organize and interpret data using graphs and measures of central tendency.



QUESTIONS TO ASK YOUR STUDENT

- "What new concepts are you learning right now in math?"
- "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

- Create problems that involve solving proportional relationships with more complexity, including rate problems and multi-step calculations.
- Introduce more complex fraction, decimal, and percentage conversions, and apply them to word problems.
- Work with positive and negative numbers in more complex real life word problems and contexts, including absolute value for bank accounts, temperature, etc.
- Provide real life problems that require writing and solving expressions with variables, and generalizing visual patterns into algebraic expressions using distance, time, and pricing.

