

SOMERS CENTRAL SCHOOL DISTRICT

Students Entering Algebra Skills to Review

The Regents Algebra course is a rigorous, fast-paced class that culminates in a required Regents examination. While not a requirement, students who are taking the course are recommended to practice and have a solid understanding of the following standards and skills from the 7th and 8th grade curriculums.

NY-7.RP (*Ratios and Proportional Relations*)

2. Recognize and represent proportional relationships between quantities
3. Use proportional relationships to solve multistep ratio and percent problems.

NY-7.EE (*Expressions, Equations, and Inequalities*)

1. Add, subtract, factor, and expand linear expressions with rational coefficients by applying the properties of operations
3. Solve multi-step real-world and mathematical problems posed with positive and negative rational numbers in any form.
4. Use variables to represent quantities in a real-world or mathematical problem

NY-8.EE (*Expressions, Equations, and Inequalities*)

1. Know and apply the properties of integer exponents to generate equivalent numerical expressions
5. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.
7. Solve multi-step linear equations in one variable (including one solution, infinitely many solutions, and no solution)
8. Analyze and solve pairs of simultaneous linear equations in two variables (solve graphically, and algebraically – recognizing when a system has one solution, no solution, or infinitely many solutions)

NY-8.F (*Functions*)

1. Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.
2. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).
4. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two values.

NY-8.G (*Geometry*)

4. Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.

During the school year we utilize Big Ideas and IXL to support our instruction, however, these resources are not available to students over the summer. In lieu of those, our favorite resources are linked below.

[Khan Academy - Grade 8](#) - This website gives free access to video lessons and practice questions

[eMATHInstruction - Grade 8](#) - This website gives free access to video lessons only

If you have any questions, please reach out to your child's math teacher or counselor prior to the end of the school year.