

Math 7
2022-2023

I. Thomas RMS.

Russell Middle School

Welcome to the 2022-2023 school year at Russell Middle School. We **at Russell Middle School**, are excited to have your child in our class! To meet students' needs, a curriculum has been pre-planned to prepare them for the Standard of Learning Assessments and also prepare them for the competitiveness of the real world. We utilize the teaming concept, which consists of cross-curriculum instructors who combine skills and ideas that are beneficial to the success of students. Students will be engaged by using math manipulatives, technology, cooperative groups and activities, 9 weeks projects, computer-assisted instruction, and board participation. It is our mission to enhance the skills your child acquired previously in mathematics while extending his/her knowledge of algebraic concepts.

We anticipate a great year full of growth academically, behaviorally, and socially as we chase perfection while catching excellence. Student success does not solely depend upon the teacher. A successful student is supported by the principal, faculty, staff, family, community, and you, the parents. We encourage your active involvement in molding your child's future. You are welcome to visit the class and participate in events sponsored by the school. Listed below is an introduction to the course, classroom guidelines, expectations, and consequences. It is imperative that you review this document with your child to ensure success in the Math 7 course.

Course Structure

The Math 7 course will implement new Virginia Standards of Learning that will further broaden the minds of students. The following SOLs will be taught this school year.

- 7.1 The student will
 - a) investigate and describe the concept of negative exponents for powers of ten;
 - b) determine scientific notation for numbers greater than zero;
 - c) compare and order fractions, decimals, percents and numbers written in scientific notation;
 - d) determine square roots; and
 - e) identify and describe absolute value for rational numbers.
- 7.2 The student will describe and represent arithmetic and geometric sequences using variable expressions.
- 7.3 The student will solve single-step and multistep practical problems, using proportional reasoning.
- 7.4 The student will
 - a) describe volume and surface area of cylinders;

- b) solve practical problems involving the volume and surface area of rectangular prisms and cylinders; and
- c) describe how changing one measured attribute of a rectangular prism affects its volume and surface area.
- 7.5 The student will determine whether plane figures – quadrilaterals and triangles – are similar and write proportions to express the relationships between corresponding sides of similar figures.
- 7.6 The student will compare and contrast the following quadrilaterals based on properties: parallelogram, rectangle, square, rhombus, and trapezoid.
- 7.7 The student, given a polygon in the coordinate plane, will represent transformations (reflections and translations) by graphing in the coordinate plane.
- 7.8 The student will investigate and describe the difference between the experimental probability and theoretical probability of an event.
- 7.9 The student, given data in a practical situation, will
 - a) construct and analyze histograms; and
 - b) compare and contrast histograms with other types of graphs presenting information from the same data set.
- 7.10 The student will represent relationships with tables, graphs, rules, and words.
- 7.11 The student will
 - a) write verbal expressions as algebraic expressions and sentences as equations and vice versa; and
 - b) evaluate algebraic expressions for given replacement values of the variables.
- 7.12 The student will
 - a) solve one- and two-step linear equations in one variable; and
 - b) solve practical problems requiring the solution of one- and two-step linear equations.
- 7.13 The student will
 - a) solve one-step inequalities in one variable; and
 - b) graph solutions to inequalities on the number line

Course Textbook

Envision Workbook

Glencoe McGraw-Hill: Math Connects Course 2

Grading Procedure

- Classwork, Daily Assignments, & Quizzes – 75%
- Tests – 25%

A: 90-100

B: 80-89

C: 70-79

D: 60-69

F: 59 and below

About My Teaching Style

As an educator, it is vital to assist students in learning the necessary, critical thinking skills in the classroom, as well as teach them to become productive members of society. Teaching is not just about what you do within the four walls, but also about the student's ability to apply what they have learned to real-world situations. We believe every child can learn, and they do not come in one size fits all packages. It is our job to bridge the gap between where students are and show them the opportunities that exist if they do not place limitations on themselves. This task does not rest solely on our shoulders. We believe in the old adage, "It takes a village to raise a child." It truly takes the collaboration between home, school, and the community.

Classroom Guidelines

To create a productive classroom climate, students are expected to follow the guidelines listed below.

1. Be prepared and have all materials ready for class.
2. Follow directions the first time they are given.
3. Raise your hand and wait to be recognized.
4. Respect others and their property.
5. Follow all policies and procedures as outlined in the BCPS student handbook.

Classroom Consequences

1. Warning
2. Reflection/Counseling Time
3. Phone Call
4. Referral

Classroom Expectations & Procedures

- Students will attend school regularly and exhibit a desire to learn by taking notes daily, participating in class discussions, and completing all homework and classwork assignments.
- Students will not interfere with the teaching and learning in class.
- Students will praise their peers and create an environment where students feel intellectually safe. Saying "stupid" and "shut up" will not be tolerated.
- Students will **show work** to receive credit. All assignments submitted for a grade **must** be written in pencil.
- Students will head all assignments with his/her first and last name, date, and period.
- Students will be responsible for his/her actions.

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Lawrenceville, VA 23868
(434) 848-2132 FAX (434) 848-6201

Mr. James Fowlkes
Principal

Mr. Darrick Summiel
Dean of Students

Mrs. Carlette Williams
Administrative Support

Homework & Make-up Work Policy

Students are responsible for checking the board each day for the bell assignment, objective, and homework. Homework should be copied onto his/her planner daily as a weekly participation grade. All homework is due at the beginning of each period. If a student has a justifiable reason for late homework, he/she should submit a brief explanatory note signed by a parent/guardian. The homework assignment should be submitted with a note on the next day. After an absence, make-up work is to be obtained from the teacher and submitted within three days; please refer to the guidelines in the student handbook.

Materials

Composition notebook	3 Ring Binder (dividers)	Dry erase markers
#2 Pencils, Red pens	Loose leaf paper	Glue sticks, Post-it notes
Pencil sharpener with lid	Box of Tissue	Hand sanitizer
4 function calculator (*optional TI-30x School Edition state approved)		

Student Progress & Assessment

Progress reports will be sent home at least once a month. Assessments will be given weekly. If a student scores below 70 on any assessment, it is strongly recommended that he/she requests after-school tutoring. Seventh-grade planning is from 8:10 - 9:10. Thank you for sharing your child with us this year. We look forward to an awesome year of learning! If you have any questions or concerns at any time during the year, please feel free to contact us by email or by leaving a message with the secretary in the school office.

Remind 101

If you would like to stay informed and up-to-date with what's happening in class, sign up for Remind 101 by sending the following text message: @

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Mrs. Carlette Williams
Administrative Support

Math 7
School Phone: (434) 848-2132
Email: thomasi@brunswickcps.org

Math 7 Syllabus Signature Page

To be filled out by the parent or guardian and the student.

Student Portion:

I have read and understand the expectations of this class

Student's name (please print)

Student's Signature

Parent / Guardian Portion:

I have reviewed the expectations of this class with my child.

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Parent or Guardian signature

Date

Parent Home Phone Number / Cellular Number

Parent Email

Please let me know if I can help explain anything about the course or class expectations. If you need me to contact you, simply circle below.

Please contact me; I have questions about the course expectations.

Yes

No

Math 7/8 Pre-Algebra
2022-2023
Mr. Ian Thomas
Russell Middle School

Welcome to the 2022-2023 school year at Russell Middle School. We are excited to have your child in my class! To meet students' needs, a curriculum has been pre-planned to prepare them for the Standard of Learning Assessments. Students will be actively engaged by using math manipulatives, technology, cooperative groups and activities, 9 weeks projects, and computer-assisted instruction. Students will continue to identify real-life applications of math concepts learned and apply them to new concepts taught while becoming better problem solvers and critical thinkers. It is our mission to enhance and extend the skills your child acquired previously in mathematics while preparing him/her for algebraic and geometric concepts that are more abstract.

We anticipate another great year full of growth academically, behaviorally, and socially as we chase perfection while catching excellence. Student success does not solely depend upon the teacher. A successful student is supported by the principal, faculty, staff, family, community, and you, the parents. We encourage your active involvement in the molding of your child's future. You are welcome to visit the class and to participate in events sponsored by the school. Listed below is an introduction to the course, classroom guidelines, expectations, and consequences. It is imperative that you review this document with your child to ensure success in the Math 7/8 Pre-Algebra course.

Course Structure

The Math 7/8 course will implement new Virginia Standards of Learning that will build on students' concrete experiences and further develop their mathematical understandings and processes for thinking and learning abstractly. The following SOLs will be taught this school year.

- 8.1 The student will
 - a) simplify numerical expressions involving positive exponents, using rational numbers, order of operations, and properties of operations with real numbers; and
 - b) compare and order decimals, fractions, percents, and numbers written in scientific notation.
- 8.2 The student will describe orally and in writing the relationships between the subsets of the real number system.
- 8.3 The student will
 - a) solve practical problems involving rational numbers, percents, ratios, and proportions; and
 - b) determine the percent increase or decrease for a given situation.
- 8.4 The student will apply the order of operations to evaluate algebraic expressions for given replacement values of the variables.
- 8.5 The student will
 - a) determine whether a given number is a perfect square; and
 - b) find the two consecutive whole numbers between which a square root lies.
- 8.6 The student will
 - a) verify by measuring and describe the relationships among vertical angles, adjacent angles, supplementary angles, and complementary angles; and
 - b) measure angles of less than 360° .
- 8.7 The student will
 - a) investigate and solve practical problems involving volume and surface area of prisms, cylinders, cones, and pyramids; and
 - b) describe how changing one measured attribute of a figure affects the volume and surface area.
- 8.8 The student will
 - a) apply transformations to plane figures; and
 - b) identify applications of transformations.

- 8.9 The student will construct a three-dimensional model, given the top or bottom, side, and front views.
- 8.10 The student will
- a) verify the Pythagorean Theorem; and
 - b) apply the Pythagorean Theorem.
- 8.11 The student will solve practical area and perimeter problems involving composite plane figures.
- 8.12 The student will determine the probability of independent and dependent events with and without replacement.
- 8.13 The student will
- a) make comparisons, predictions, and inferences, using information displayed in graphs; and
 - b) construct and analyze scatterplots.
- 8.14 The student will make connections between any two representations (tables, graphs, words, and rules) of a given relationship.
- 8.15 The student will
- a) solve multistep linear equations in one variable with the variable on one and two sides of the equation;
 - b) solve two-step linear inequalities and graph the results on a number line; and
 - c) identify properties of operations used to solve an equation.
- 8.16 The student will graph a linear equation in two variables.
- 8.17 The student will identify the domain, range, independent variable, or dependent variable in a given situation.

Course Textbook

Envision Workbook

Glencoe McGraw-Hill: Pre-Algebra

Grading Procedure

- Test & Performance Evaluation – 40%
- Quiz – 25%
- Classwork – 20%
- Lab/Research/Homework – 10%
- Participation – 5%

A: 90-100

B: 80-89

C: 70-79

D: 60-69

F: 59 and below

About My Teaching Style

As an educator, it is vital to assist students in learning the necessary, critical thinking skills in the classroom, as well as teach them to become a productive member of society. Teaching is not just about what you do within the four walls, but also about the students' ability to apply what they have learned to real-world situations. We believe every child can learn, and they do not come in one size fits all packages. It is our job to bridge the gap between where students are and show them the opportunities that exist if they do not place limitations on themselves. This task does not rest solely on our shoulders. We believe in the old adage, "It takes a village to raise a child." It truly takes the collaboration between home, school, and the community.

Classroom Guidelines

To create a productive classroom climate, students are expected to follow the guidelines listed below.

1. Be prepared and have all materials ready for class.
2. Follow directions the first time they are given.
3. Raise your hand and wait to be recognized.
4. Respect others and their property.
5. Follow all policies and procedures as outlined in the BCPS student handbook.

Classroom Consequences

1. Warning
2. Reflection/Counseling Time
3. Phone Call
4. Referral

Classroom Expectations & Procedures

- Students will attend school regularly and exhibit a desire to learn by taking notes daily, participating in class discussions, and completing all homework and classwork assignments.
- Students will not interfere with the teaching and learning in class.
- Students will praise their peers and create an environment where students feel intellectually safe. Saying "stupid" and "shut up" will not be tolerated.
- Students will **show work** to receive credit. All assignments submitted for a grade **must** be written in pencil.
- Students will head all assignments with his/her first and last name, date, and period.
- Students will be responsible for his/her actions.

Homework & Make-up Work Policy

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homework, he/she should submit a brief explanatory note signed by a parent/guardian. The homework assignment should be submitted with a note on the next day. After an absence, make-up work is to be obtained from the teacher and submitted within three days; please refer to the guidelines in the student handbook.

Materials

Composition notebook	3 Ring Binder (dividers)	Dry erase markers
#2 Pencils, Red pens	Loose leaf paper	Glue sticks, Post-it notes
Pencil sharpener with lid	Box of tissue	Hand sanitizer
4 function calculator (*optional TI-30x School Edition state approved)		

Student Progress & Assessment

Progress reports will be sent home at least once a month. Assessments will be given weekly. If a student scores below 70 on any assessment, it is strongly recommended that he/she requests after school tutoring. Seventh grade planning is from 8:10 - 9:10. Thank you for sharing your child with us this year. We look forward to an awesome year of learning! If you have any questions or concerns at any time during the year, please feel free to contact us by email or by leaving a message with the secretary in the school office.

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Pre-Algebra
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Pre-Algebra Syllabus Signature Page

To be filled out by the parent or guardian and the student.

Student Portion:

I have read and understand the expectations of this class

Student's name (please print)

Student's Signature

Parent / Guardian Portion:

I have reviewed the expectations of this class with my child.

Parent or Guardian signature

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Date

Parent Home Phone Number / Cellular Number

Parent Email

Please let me know if I can help explain anything about the course or class expectations. If you need me to contact you, simply circle below.

Please contact me; I have questions about the course expectations.

Yes

No

Algebra I
2022-2023
Faculty
Russell Middle School

Welcome to the 2022-2023 school year at Russell Middle School. I am excited to have your child in my class! To meet students' needs, a curriculum has been pre-planned to prepare them for the Standard of Learning Assessments. Students will be actively engaged by using math manipulatives, technology, cooperative groups and activities, 9 weeks projects, and computer assisted instruction. Students will continue to identify real-life applications of math concepts learned and apply them to new concepts taught while becoming better problem solvers and critical thinkers. It is my mission to enhance and extend the skills your child acquired previously in mathematics while preparing him/her for algebraic and geometric concepts that are more abstract.

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that you review this document with your child to ensure success in the Algebra I course.

Course Structure

The Algebra I course will implement new Virginia Standards of Learning that will further broaden the minds of students. The following SOLs will be taught this school year.

- A.1 The student will represent verbal quantitative situations algebraically and evaluate these expressions for given replacement values of the variables.
- A.2 The student will perform operations on polynomials, including
 - a) applying the laws of exponents to perform operations on expressions;
 - b) adding, subtracting, multiplying, and dividing polynomials; and
 - c) factoring completely first- and second-degree binomials and trinomials in one or two variables. Graphing calculators will be used as a tool for factoring and for confirming algebraic factorizations.
- A.3 The student will express the square roots and cube roots of whole numbers and the square root of a monomial algebraic expression in simplest radical form.
- A.4 The student will solve multistep linear and quadratic equations in two variables, including
 - a) solving literal equations (formulas) for a given variable;
 - b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets;
 - c) solving quadratic equations algebraically and graphically;
 - d) solving multistep linear equations algebraically and graphically;
 - e) solving systems of two linear equations in two variables algebraically and graphically; and
 - f) solving real-world problems involving equations and systems of equations.Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions.
- A.5 The student will solve multistep linear inequalities in two variables, including
 - a) solving multistep linear inequalities algebraically and graphically;
 - b) justifying steps used in solving inequalities, using axioms of inequality and properties of order that are valid for the set of real numbers and its subsets;
 - c) solving real-world problems involving inequalities; and
 - d) solving systems of inequalities.
- A.6 The student will graph linear equations and linear inequalities in two variables, including
 - a) determining the slope of a line when given an equation of the line, the graph of the line, or two points on the line. Slope will be described as rate of change and will be positive, negative, zero, or undefined; and
 - b) writing the equation of a line when given the graph of the line, two points on the line, or the slope and a point on the line.
- A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including

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- a) determining whether a relation is a function;
 - b) domain and range;
 - c) zeros of a function;
 - d) x- and y-intercepts;
 - e) finding the values of a function for elements in its domain; and
 - f) making connections between and among multiple representations of functions including concrete, verbal, numeric, graphic, and algebraic.
- A.8 The student, given a situation in a real-world context, will analyze a relation to determine whether a direct or inverse variation exists, and represent a direct variation algebraically and graphically and an inverse variation algebraically.
- A.9 The student, given a set of data, will interpret variation in real-world contexts and calculate and interpret mean absolute deviation, standard deviation, and z-scores.
- A.10 The student will compare and contrast multiple univariate data sets, using box-and-whisker plots.
- A.11 The student will collect and analyze data, determine the equation of the curve of best fit in order to make predictions, and solve real-world problems, using mathematical models. Mathematical models will include linear and quadratic functions.

Course Textbook

Glencoe McGraw-Hill: Algebra I

Grading Procedure

- Test & Performance Evaluation – 40%
- Quiz – 25%
- Classwork – 20%
- Lab/Research/Homework – 10%
- Participation – 5%

A: 90-100 B: 80-89 C: 70-79 D: 60-69 F: 59 and below

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Algebra I Syllabus Signature Page

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Student Portion:

I have read and understand the expectations of this class

Student's name (please print)

Student's Signature

Parent / Guardian Portion:

I have reviewed the expectations of this class with my child.

Parent or Guardian signature

Date

Parent Home Phone Number / Cellular Number

Parent Email

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Yes

No