



**SAINT GEORGE  
SCHOOL**  
FOUNDED 1965



Porfirio Herrera No. 6, Ensanche Piantini.  
Santo Domingo, D. N. Rep. Dominicana



T. 809 562 5262 F. 809 562 5015  
[www.stgeorge.edu.do](http://www.stgeorge.edu.do)

## **MATHEMATICS, 8<sup>th</sup> GRADE, 2<sup>nd</sup> FORM**

Teacher: Mr. Corletto

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Academic year: 2011-2012

### **1. INTRODUCTION AND DESCRIPTION OF COURSE**

This standards-based eighth grade course places strong emphasis on applications of the mathematical concepts and skills related to decimals, fractions, percents, integers, and rational numbers to solving a variety of real-world problems. Irrational numbers are introduced to expand the real number system. In addition, students will extend their understanding of the concepts of proportion and measurement and apply this knowledge in problem-solving situations. Students will further develop their algebraic thinking by investigating the merits and limitations of graphical, symbolic, tabular, and verbal representations of relationships. Students will explore linear functions, systems of equations and inequalities, operations with polynomials and factoring polynomials. In addition, they will be introduced to non-linear functions such as quadratic, exponential, rational and radical functions. Throughout the course there is an emphasis on the process standards of problem-solving, communication, reasoning, representations, and connections.

### **2. SKILLS**

By the end of the course, students will be able to:

- Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.
- Understand the connections between proportional relationships in the real world, lines, and linear equations.
- Analyze and solve linear equations and pairs of simultaneous linear equations.
- Perform operations with polynomials and learn when to apply the different cases of factorization.
- Use functions (linear and non-linear) to model relationships between quantities.
- Apply the Pythagorean Theorem to solve a wide variety of real world problems.
- Draw, construct, and describe geometrical figures, describe the relationships between them, and compute perimeter, area, surface area and volume.
- Use random sampling to draw inferences about a population (statistics and probability).



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### 3. CONTENT

- Algebra, Integers, and Equation Solving
- Algebra and Rational Numbers
- Similarity, Geometry, and Measurement
- Linear Equations and Functions, Inequalities, and Systems
- Polynomials and Factoring
- Quadratic Equations and Functions
- Other Non-linear Functions: Exponential, Rational, Radical
- Data Analysis and Probability

### 4. TEXTBOOKS AND OTHER RESOURCES

-Math, Course 3, by Larson, Boswell, Kanold, and Stiff; McDougal Littell

-Algebra 1, by Larson, Boswell, Kanold, and Stiff; McDougal Littell

\* These core texts do not make up the entirety of the printed resources to be used in the course. Other resources will include: [www.classzone.com](http://www.classzone.com)

\*Students are expected to have the following material for class: Notebook for class notes, notebook for homework, black pens, pencils, eraser, sharpener, geometry set (rulers, protractor, compass)

### 5. TEACHING STRATEGIES

Students will benefit from a wide range of teaching approaches and strategies, including but not limited to: individual, pair and group work; a variety of written, oral activities; question and answer; small group and whole class discussion; independent and group research; debate; vocabulary crossword puzzles; math Jeopardy trivia game; collection of math puzzles and riddles; math games; math animated applets; math lesson media clips and PowerPoint presentations.

## **6. EVALUATIONS**

The students will receive a rubric (grid that lists criteria) explaining precisely how they will be evaluated for ALL assignments.

- Participation and work habits (10%)
- Homework (15%)
- Quizzes (15%)
- Class Work (35%) (Mini quizzes, performance tasks, formative tests)
- Tests and Group Projects (25%) (Test and major projects)

## **7. OTHER REMARKS REGARDING OUR CLASS**

Be on time for class. Unexcused tardiness is not permitted.

Students must always be polite and respectful towards the teacher and peers. Do not make sarcastic, demeaning, or hurtful comments in or out of class. Offer constructive criticism in a respectful manner.

Expect homework on a daily basis.

Enrichment classes will be available upon student request.

It is student's responsibility to make up work after an absence. This includes reschedule quizzes, assignments due dates, and enrichment classes.

There will be minor assessments on a weekly basis and major assessments on a bi-weekly basis.