

MATHEMATICS GRADE 7

2019-2020

William M. Garry
william_garry@fa.org

The seventh grade mathematics program builds on the structure and methods developed in the previous year. The content of course both in the selection of topics and in the style and language in which they are presented closely parallels and extends the sixth grade program. Thus, fundamental concepts and processes are reinforced. The changes in the seventh grade program center on the level of presentation, material, and the level of testing. In seventh grade more emphasis is put on higher level thinking skills and the process that goes into solving a problem. Included in this, is a vision that students will learn to value and become confident in their mathematical ability. The chief thrust of the seventh grade program is to have students master all basic computation skills and to lead them into the direction of mathematical reasoning and processing. This will be emphasized with mathematical communication, (student to student discourse), and various means of exploring problem solving using real life problems and technology. The degree of success achieved at this level determines in a large measure whether a student will continue his or her mathematics education in Intro Algebra or Algebra in eighth grade.

Math 7 Curriculum Guide

I. Integers

- Addition and subtraction
- Multiplication
- Division

II. Expressions

- Order of operations
- Numeric expressions
- Translating phrases to algebraic expressions
- Functions and patterns
- Properties of addition and multiplication
- Combining like terms

III. Solving Algebraic Equations and Word Problems

- Introduction
- Two-step
- Multi-step
- Distributive
- Variables on both sides
- inequalities and graphs
- solving inequalities

IV. Ratio/proportion

- Ratio
- Proportions
- Rate
- Scale drawing
- % To fraction to decimal/ see geometry
- Case I, II, III IV % problems

V. Geometry

- Basic Geo terms
- Angles
- Special angles/sup/comp/vertical
- Parallel and perpendicular
- Triangles
- Polygons
- Quadrilaterals
- Congruent polygons
- Similar polygons
- parallel line relationships
- Circle geometry
- Area\ pg.
- Irregular areas
- volume

VI. Statistics

- Misleading
- %/fraction/decimal
- Bar graph
- Line graph
- Circle graph
- Scatter plot
- Reading graphs

VII. Number Theory

- Factors and multiples
- Divisibility
- Prime and composite
- Exponents
- Prime factorization
- Gcf
- Lcm

VIII. Operations with Rational Numbers

- Ordering
- Improper and mixed numbers
- Repeating decimals
- Add and Sub. Like denominators
- Add. And sub. Unlike denominators
- Equations
- Multiplication
- Division
- Scientific notation

IX. Graphing on the Cartesian plane

- Coordinate plane
- Linear equations
- Functions
- Slope
- Systems of equations

Assessment

Assessments are made up of tests, (100 points and they are all to be signed), quizzes (< 50 points) and project work (40-100 points). Homework is not graded every day, but will be collected occasionally and accounted for on a daily basis. Adding up all student points and dividing by the total number of possible points for a precise average determine a student's grade. The Blow pop question of the week is also an important part of the curriculum and is counted as a 5 point quiz.

Extra Help

Extra help is given every day during the assigned extra help block and after school on appointment until March..

How to be successful in 7th grade math:

- 1) Do your practice (HW) every night and be a good partner in class.
- 2) Accurately correct your HW either with the class or with your partner. If you get it wrong, don't just settle....find out WHY!
- 3) Everyday be proactive and involved in the learning process. Ask questions whenever you need too!
- 4) Always take neat and accurate notes. And if that is not your best skill, then print out a complete copy from schoology every day.
- 5) Show concern for what you do..... it will always make a difference!
- 6) Use extra help if you need it.
- 7) Study,study,study.....for tests and announced quizzes.

What you need for class:

A RESPECT FOR LEARNING, YOUR CLASSMATES AND YOURSELF

- 1) open, inquisitive mind
- 2) **Note outlines will be provided; you need a folder to organize them!**
- 3) Work paper (**Not SCRAP!**) of some kind that is easy to hand in.(loose leaf etc..)
- 4) pencil or erasable pen

Daily class procedure:

- 1) Enter room on time and get set for class when the door shuts.
- 2) Without an announcement you should have your Math folder, notes, pencil, and hw out and ready to go.....this is something that takes consistency and discipline
- 3) ***Look on the Do now board and follow the simple step-by-step plan of what to do. It will always tell you what to do and what to expect that day.***
- 4) When finished with the Do Nows get ready for the days lesson.

If you are absent:

- 1) **Always check Schoology as complete notes , homework, and learning aides(how to's, hw help, tutorials) will be available everyday**

Grading:

You will be given many quizzes this year. Some will be announced some will not. They are usually of a 4- 50-point value. Tests are always announced and are 100-point value. **ALL TESTS WILL ALWAYS BE SIGNED!!!** Averages are determined by dividing the points that you have accumulated by the total number of points possible to get a precise average. HW work is not graded every day but will be collected on occasion. You are always accountable for having your homework, however, we know that sometimes there are occasions that it will be missed, if this becomes a pattern notification will be sent home.

Some other stuff you should know:

Math in seventh grade is different than in past years. While basic skills are still assessed and important, they are now merely the tool used to begin the study of real mathematics. We will spend much of our time solving application type problems that will require the most important thing about mathematics.... **thinking skills**. The trick here is to understand that this might come more easily to some than to others. Do not get discouraged if it takes you a little longer, or requires a little more help. Be positive, ask questions, and ask me for help... that is why I am here.

In keeping with the academic honesty policy, the work that any student brings to class should be his or her own, irrespective of whether it is being collected or graded.