

**CORE MATH 7****FOCUS OF MIDDLE SCHOOL MATHEMATICS LEARNING**

- To build on students' concrete reasoning experiences developed in previous grades
- To construct through active learning experiences a more advanced understanding of mathematics
- To develop deep mathematical understandings required for success in abstract learning experiences
- To apply mathematics as a tool in solving real-world problems

Counselors are available to assist parents and students with course selections and career planning. Parents may arrange to meet with the counselor by calling the school's guidance department.

COURSE DESCRIPTION

Core Math 7 is a mathematics course for seventh grade students that builds upon the skills learned in Core Math 6. The course focuses on the development of problem-solving skills and the acquisition of mathematical vocabulary and symbols. The active engagement of students along with the use of manipulatives and technology, such as calculators, computers, and spreadsheets, will allow students to develop an understanding of the mathematical principles they are learning. Facility in the use of technology will not be a substitute for students' understanding of quantitative concepts and proficiency in basic computations. During this course students will be: investigating negative exponents; exploring the scientific notation of numbers; evaluating the absolute value of rational numbers; representing arithmetic and geometric sequences using variables; modeling and adding integers; solving multi-step practical problems involving proportional reasoning; solving practical problems involving volume and surface area of rectangular prisms and cylinders; comparing and contrasting quadrilaterals; representing transformations on a coordinate plane given a polygon; investigating probability and counting principles; analyzing data and constructing graphs; exploring various algebraic representations of relationships; and exploring the properties of real numbers.

PREREQUISITE

Core Math 6

OPTION FOR NEXT COURSE

Mathematics 8

REQUIRED STUDENT TEXTBOOK

Glencoe Pre-Algebra (Virginia Edition). John A. Carter, Ph.D., Gilbert J. Cuevas, Ph.D., Roger Day, Ph.D., and Carol Malloy, Ph.D. Glencoe McGraw-Hill, 2012

RECOMMENDED CALCULATOR

TI-30Xa SEVA

Virginia Beach Instructional Objectives
Core Math 7 – MA 3114

VBO #	Objective
Number and Number Sense	
MA.C7.NS.7.1	The student will investigate and describe the concept of negative exponents for powers of ten. (SOL 7.1a)
MA.C7.NS.7.2	The student will determine scientific notation for numbers greater than zero. (SOL 7.1b)
MA.C7.NS.7.3	The student will compare and order fractions, decimals, percents, and numbers written in scientific notation. (SOL 7.1c)
MA.C7.NS.7.4	The student will determine square roots. (SOL 7.1d)
MA.C7.NS.7.5	The student will identify and describe absolute value for rational numbers. (SOL 7.1e)
MA.C7.NS.7.6	The student will describe and represent arithmetic and geometric sequences using variable expressions. (SOL 7.2)
Computation and Estimation	
MA.C7.CE.7.7	The student will model addition, subtraction, multiplication, and division of integers. (SOL 7.3a)
MA.C7.CE.7.8	The student will add, subtract, multiply, and divide integers. (SOL 7.3b)
MA.C7.CE.7.9	The student will solve single-step and multistep practical problems, using proportional reasoning. (SOL 7.4)
Measurement	
MA.C7.ME.7.10	The student will describe volume and surface area of cylinders. (SOL 7.5a)
MA.C7.ME.7.11	The student will solve practical problems involving the volume and surface area of rectangular prisms and cylinders. (SOL 7.5b)
MA.C7.ME.7.12	The student will describe how changing one measured attribute of a rectangular prism affects its volume and surface area. (SOL 7.5c)
MA.C7.ME.7.13	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. (SOL 7.6)
Geometry	
MA.C7.GE.7.14	The student will compare and contrast the following quadrilaterals based on properties: parallelogram, rectangle, square, rhombus, and trapezoid. (SOL 7.7)
MA.C7.GE.7.15	The student, given a polygon in the coordinate plane, will represent transformations (reflections, dilations, rotations, and translations) by graphing in the coordinate plane. (SOL 7.8)
Probability and Statistics	
MA.C7.PS.7.16	The student will investigate and describe the difference between the experimental probability and theoretical probability of an event. (SOL 7.9)
MA.C7.PS.7.17	The student will determine the probability of compound events, using the Fundamental (Basic) Counting Principle. (SOL 7.10)
MA.C7.PS.7.18	The student, given data in a practical situation, will construct and analyze histograms. (SOL 7.11a)
MA.C7.PS.7.19	The student, given data in a practical situation, will compare and contrast histograms with other types of graphs presenting information from the same data set. (SOL 7.11b)

	Patterns, Functions, and Algebra
MA.C7.PF.7.20	The student will represent relationships with tables, graphs, rules, and words. (SOL 7.12)
MA.C7.PF.7.21	The student will write verbal expressions as algebraic expressions and sentences as equations and vice versa. (SOL 7.13a)
MA.C7.PF.7.22	The student will evaluate algebraic expressions for given replacement values of the variables. (SOL 7.13b)
MA.C7.PF.7.23	The student will solve one- and two-step linear equations in one variable. (SOL 7.14a)
MA.C7.PF.7.24	The student will solve practical problems requiring the solution of one- and two-step linear equations. (SOL 7.14b)
MA.C7.PF.7.25	The student will solve one-step inequalities in one variable and graph solutions on the number line. (SOL 7.15a, b)
MA.C7.PF.7.26	The student will apply the commutative and associative properties for addition and multiplication to operations with real numbers. (SOL 7.16a)
MA.C7.PF.7.27	The student will apply the distributive property to operations with real numbers. (SOL 7.16b)
MA.C7.PF.7.28	The student will apply the additive and multiplicative identity properties to operations with real numbers. (SOL 7.16c)
MA.C7.PF.7.29	The student will apply the additive and multiplicative inverse properties to operations with real numbers. (SOL 7.16d)
MA.C7.PF.7.30	The student will apply the multiplicative property of zero to operations with real numbers. (SOL 7.16e)



MISSION STATEMENT

The Virginia Beach City Public Schools, in partnership with the entire community, will empower every student to become a life-long learner who is a responsible, productive and engaged citizen within the global community.

Dr. James G. Merrill, Superintendent

**DEPARTMENT OF CURRICULUM AND INSTRUCTION
2512 George Mason Drive • P.O. Box 6038 • Virginia Beach, Virginia 23456-0038**

Virginia Beach City Public Schools does not discriminate on the basis of race, color, national origin, sex, disability, or age in its programs and activities and provides equal access to the Boy Scouts and other designated youth groups. School Board policies and supporting regulation (Policies 2-33, 4-4, 5-7, and 6-7 and Regulation 5-44.1) provide equal access to courses, programs, counseling services, physical education and athletics, vocational education, instructional materials, and extracurricular activities. The following staff are designated to handle inquiries regarding the non-discrimination policies: Director of Guidance Services at (757) 263-1980 or to the Assistant Superintendent of Human Resources at (757) 263-1133.

For further information on notice of non-discrimination, visit <http://wdcrobcolp01.ed.gov/CFAPPS/OCR/contactus.cfm> for the address and phone number of the office that serves your area, or call 1-800-421-3481.

Alternative formats of this publication which may include taped, Braille, or large print materials are available upon request for individuals with disabilities. Call or write The Department of Curriculum and Instruction, Virginia Beach City Public Schools, 2512 George Mason Drive, P.O. Box 6038, Virginia Beach, VA 23456-0038. Telephone (757) 263-1070 or (757) 263-1429; fax (757) 263-1424; TDD (757) 263-1240

Visit our website at vbschools.com -
your virtual link to Hampton Roads' largest school system

No part of this publication may be produced or shared in any form without giving specific credit to Virginia Beach City Public Schools.

CIE-0005 (Revised 8/12)