

Math 7/7-co Classroom Information

Instructor: Mrs. Hayes

Classes: Periods 3, 4, 7 & 8

Contact: 631-367-6837 or lhayes@csk12.ny.us

Materials needed for class each day:

1. Pencils
2. Binder with 2 sections:
 - a. Classwork
 - b. Homework
3. Folder to keep signed tests and quizzes
4. Calculator – the school district will provide you with one.

Extra help:

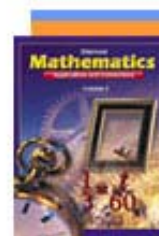
Mondays after school (2:30 – 3:00) and Wednesday mornings (7:20-7:40) in room S-20. Please come to extra help with a specific question or topic that you do not understand.

Grading Policy:

1. Homework will be assigned and checked daily. Each student will begin each quarter with a homework grade of 100 points. If a homework assignment is missing, 5 points will be deducted from the total number of points. Homework will be posted on the front board daily.
2. There will be a notebook quiz each quarter worth 30 points. It will consist of 10 questions that can be answered using your notebook. If you keep a neat and organized binder, you will have no problem getting the full 30 points every quarter.
3. Tests or quizzes will be given weekly. Tests will be given on math test day which is Thursday. Quizzes can be given on any day, but will only take 20 minutes.
4. Quarter grades will be calculated based on a total points system.

Math 7 Curriculum Outline – 2008/09

Instructor: Mrs. Hayes
Classes: Periods 3, 6, 8 & 9
Contact: 631-367-6924 lhayes@csk12.ny.us
Textbook: "Mathematics: Applications and Connections, Course 2";
Glencoe; 2001



The seventh grade math curriculum is divided into the seventeen concept units listed below.
Although the material in Units 1 through 12 will be taught prior to the March 2009 NYS Math
Assessment Test, the order in which the material is presented is subject to change.

Unit 1: Review of 6th grade Curriculum

Students will be assessed based on their understanding of: evaluating 2 variable expressions; translating and solving two-step verbal problems; solving simple proportions; identifying and plotting points on a coordinate plane; recording data on a frequency table; constructing Venn Diagrams; determining the most appropriate graph to display data; listing possible outcomes for compound events; and determining probability of dependent events.

Unit 2: Number Systems

Students will learn how to classify numbers as counting, whole, integers, rational and irrational. Students will gain an understanding of the characteristics and definitions of rational and irrational numbers including the value of π . Students will learn how to place rational and irrational numbers on a number line; learn how to square, take the square root and estimate the square of a number.

Unit 3: Exponents

Students will develop the laws of exponents for multiplication and division. Students will also gain a conceptual understanding of negative and zero exponents with a base of ten and relate to fractions and decimals. Students will learn how to write numbers in scientific notation and be able to translate numbers from scientific notation to standard form. Students will learn how to compare values in scientific notation.

Unit 4: Evaluating Expressions

Students will learn how to simplify expressions using order of operations (including absolute value and/or integral exponents greater than 0) and how to evaluate expressions.

Unit 5: Number Theory

Students will learn how to determine the prime factorization of a given number and write in exponential form. Students will discover common factors and how to find the greatest common factor of two or more integers. Students will determine multiples of a number and how to identify the least common multiple of two or more numbers.

Unit 6: Integers

Students will explore adding, subtracting, multiplying and dividing integers. Students will develop rules for adding and subtracting integers with and without the aid of a number line.

Unit 7: Equation Solving/Formulas

Students will learn how to translate two-step verbal expressions into algebraic expressions, and solve. Students will explore solving one- step inequalities and graph results on a number line. Students will evaluate formulas pertaining to surface area, rate and density based on given input values.

Unit 8: Measurement 1

Students will convert capacities and volumes within a given system. Students will identify customary and metric units of mass and be able to convert values between the systems. Students will explore tools and techniques for measurement and determine which provide appropriate level of precision; mass. Students will identify the relationship between relative error and magnitude when dealing with large numbers. Students will determine personal references for customary/metric units of mass and justify the reasonableness of the mass of an object.

Unit 9: Geometry 1

Students will explore the relationship between the diameter of a circle and its circumference (π) and be able to compute values pertaining to diameter and radius. Students will use a protractor to draw central angles within a circle. Students will be able to determine the missing angle of a quadrilateral given its other angle measurements.

Unit 10: Volume/Surface Area

Students will identify the two-dimensional shapes that make up the faces and bases of three-dimensional shapes (prisms, cylinders, cones and pyramids). Students will learn how to calculate the volume of prisms and cylinders using a given formula. Students will determine the surface area of prisms and cylinders using a variety of methods.

Unit 11: Statistics

Students will identify and collect data using a variety of methods and learn how to display it on a circle graph. Students will convert raw data into double bar graphs and double line graphs. Students will calculate the range for a given set of data and determine the appropriate measure of central tendency. Students will learn how to read and interpret data represented graphically (pictograph, histogram, line graph, double line/bar graphs, or circle graph). Students will discover that statistics can be misleading and learn how to identify and explain why it's misleading. Students will learn how to interpret data to provide the basis for predictions and to establish experimental probabilities. Students will

determine the validity of sampling methods to predict outcomes and use this knowledge to design and conduct an experiment and compare actual results to predicted results.

Unit 12: Problem Solving

Students will explore the different methods and strategies for solving problems including: working backwards, trial and error, drawing diagrams or making a chart, and solving simpler problems.

******* NYS 7th Grade Assessment March 2009 *******

Unit 13: Graphing

Students will learn how to draw the graphic representation of a pattern from an equation or from a table of data. Students will create algebraic patterns using charts/tables, graphs, equations, and expressions. Students will develop and write an equation to represent a function from a table of values.

Unit 14: Geometry II

Students will learn how to identify a right triangle and label the right angle, hypotenuse and legs. Students will explore the relationship between the lengths of the three sides of a right triangle to develop the Pythagorean Theorem. Students will use the Pythagorean Theorem to find the unknown length of a side of a right triangle, and vice versa, whether it is a right triangle by applying the Pythagorean Theorem. Students will discover the formula for determining the sum of the interior angles of polygons.

Unit 15: Measurement II

Students will calculate distance using a map scale, and price using proportions. Students will compare unit prices and convert money between different currencies with the use of an exchange rate table and a calculator.

Unit 16: Polynomials

Students will learn how to identify a polynomial as an algebraic expression containing one or more terms. Students will add and subtract monomials with exponents of one.

Unit 17: Equation Solving II

Students will learn how to solve multi-step equations by combining like terms, using the distributive property, or moving variables to one side of the equation.