Mathematics **Brunswick School Department**

Transitional Mathematics
Unit 2: Computation

Essential Understandings	▪ The basic computational operations used in mathematics can be used to solve verbal math problems. ▪ Mathematics has specific rules for operations involving decimals and fractions. ▪ For some problems in math, it is more efficient to change a fractional answer to a decimal; or to change a decimal answer to a fraction. ▪ Fractional answers in math are usually reduced to lowest terms.
Essential Questions	▪ What are real numbers? ▪ What is the rule for adding and subtracting decimal numbers? ▪ How do you multiply and divide decimal numbers? ▪ How do you add and subtract fractions? ▪ How do you find a common denominator? ▪ How do you multiply and divide fractions? ▪ What is the least common multiple? ▪ How do you find the LCM? ▪ What does it mean for a fraction to be in lowest terms? ▪ How do you reduce fractions to lowest terms? ▪ How do you convert fractions to decimals? ▪ How do you convert decimals to fractions?
Essential Knowledge	▪ Real numbers are the set of positive and negative numbers including all rational numbers, all irrational numbers and zero. ▪ Decimals can be added, subtracted, multiplied and divided. ▪ Fractions can be reduced to lowest terms by division. ▪ The least common multiple can be determined by prime factorization. ▪ Fractions can be added, subtracted, multiplied and divided. ▪ Fractions can be converted to decimals by division. ▪ Decimals can be converted to fractions by utilizing powers of ten.
Vocabulary	▪ <u>Terms</u>: o real numbers, fraction, numerator, denominator, least common multiple, lowest terms, convert, decimal, prime factorization, negative numbers, positive numbers.
Essential Skills	▪ Identify real numbers. ▪ Identify positive and negative numbers. ▪ Add, subtract, multiply and divide real numbers. ▪ Reduce fractions to lowest terms. ▪ Convert fractions to decimals. ▪ Convert decimals to fractions. ▪ Determine the least common multiple. ▪ Identify and use the rules for adding, subtracting, multiplying and dividing decimals. ▪ Identify and use the rules for adding, subtracting, multiplying and dividing fractions.

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Related Maine Learning Results	Mathematics A. Number Real Number A1. Students will know how to represent and use real numbers. a. Use the concept of nth root. b. Estimate the value(s) of roots and use technology to approximate them. c. Compute using laws of exponents. d. Multiply and divide numbers expressed in scientific notation. e. Understand that some quadratic equations do not have real solutions and that there exist other number systems to allow for solutions to these equations.
Sample Lessons And Activities	▪ Students will utilize the A+ learning lab (lesson and assessment). ▪ Students will work in groups to solve word problems using their knowledge of fractions and decimals.
Sample Classroom Assessment Methods	▪ Students will complete homework assignments on the essential skills from their textbook. ▪ Students will demonstrate understanding through oral responses to group problem solving. ▪ Students will take teacher generated tests and quizzes. ▪ Students will take tests in the A+ learning lab.
Sample Resources	▪ Publications: o Saxon-Algebra 1/2