

## **Number and Operations**

**Goal: The learner will understand and compute with rational numbers**

**Objective:**

**1.05 Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.**

To achieve this objective, students should:

- Classify numbers as prime, composite or neither.
- Recognize that factors come in pairs and that once one factor is found, another can also be found.
- Students should know that a number is a factor of itself and that its pair is the number and 1.
- Understand the connection between division and finding factors of a number.
- Use the divisibility rules for 2, 3, 4, 5, 6, 9, and 10.
- Recognize that a number may have several different factorizations, but, except for order, each number greater than 1 has exactly one prime factorization.
- Understand relationships among factors, divisors, multiples and products.
- Develop strategies for finding common factors and GCF of 2 or more numbers and use these factors in contextual situations.
- Develop strategies for finding common multiples and LCM of 2 or more numbers and use these multiples in contextual situations.
- Use factors, multiples, and prime factorization to solve problems. The formal use of the laws of exponents is not expected until Algebra I.
- Simplify numeric and symbolic expressions with exponents using repeated multiplication.
- Understand that exponents represent repeated multiplication
- Write prime factorization of a number using exponential notation.