

Mathematics
Unit 5: Number Sense

Essential Understandings	<ul style="list-style-type: none"> ▪ There are various ways to represent a number.
Essential Questions	<ul style="list-style-type: none"> ▪ How can numbers be expressed, ordered, and compared? ▪ What is standard form/notation? ▪ What is expanded form/notation? ▪ How does one round a number? ▪ What is prime number? ▪ What is a composite number? ▪ What is a factor tree and how is it used? ▪ How can one compare fractions? ▪ How can one compare decimals? ▪ How can a fraction be expressed as a mixed number? ▪ How can a mixed number be expressed as a fraction? ▪ How does one convert a fraction to its decimal equivalent? ▪ How does one convert a decimal to its fractional equivalent? ▪ What is a percentage?
Essential Knowledge	<ul style="list-style-type: none"> ▪ Standard form/notation is the numeral written with one digit for each place value. ▪ Expanded form/notation shows the place value of each digit. ▪ One rounds a whole number to express it in a simplified form by finding the nearest ten, hundred, thousand, ten thousand, etc. ▪ A prime number is a whole number that has exactly two different positive factors, itself and one. ▪ A composite number has more than two factors. ▪ A factor tree is a visual model that represents all factor pairs for a whole number. ▪ Two fractions are equivalent if they are the same size or on the same point on a number line. ▪ Improper fractions can be expressed as mixed numbers. ▪ Mixed numbers can be expressed as improper fractions. ▪ Fractions can be converted to its decimal equivalent. ▪ Decimals can be converted to its fractional equivalent. ▪ A percentage is a proportion of a hundred.
Vocabulary	<ul style="list-style-type: none"> ▪ <u>Terms:</u> <ul style="list-style-type: none"> ○ positive, negative, integers, rational numbers, powers of ten, fifths, eighths, twelfths, sixths, percents, equivalent fractions and decimals

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Essential Skills	<ul style="list-style-type: none"> ▪ Read, write, compare, order, and explain whole numbers to 1,000,000,000 in standard and expanded form including the use of $<$, $>$, and $=$. (I, R, A) ▪ Round numbers up to and including the nearest 10 million. (I, R, A) ▪ Identify prime numbers and composites between 1 and 100. (R) ▪ Use factor trees to write composite numbers as products of primes. (R) ▪ Identify, read, write, and illustrate fractions of a whole or set with numerators and denominators from 2 to 10, 12, 16, 100, and 1000 using area, set, and length models. (R, A) ▪ Recognize and generate equivalent fractions with denominators 2, 3, 4, 5, 6, 8, and 10. (I, R, A) ▪ Compare and order positive fractions with common denominators 2, 3, 4, 5, 6, 8, 10, 12, 100, and 1000 using area, set, and length models. (I, R, A) ▪ Represent improper fractions as mixed numbers and mixed numbers as improper fractions using area, length, and set models. (R, A) ▪ Recognize and write the decimal equivalents of tenths, hundredths and thousandths. (A) ▪ Compare, order, read, and round decimals to the thousandths place. (I, R, A) ▪ Recognize and use number notation and place value in numbers to the thousandths. (I, R, A) ▪ Convert from the fraction to the decimal form and the decimal form to the fraction for tenths, fourths, halves, and fifths. (I, R, A) ▪ Identify and compare benchmark percents as part to whole relationship (10%, 25%, 50%, 75% and 100%) using area, set and length models. (I, R, A)
Related Maine Learning Results	<p>A. Number Whole Number A1.Students understand and use number notation to 10 million in numeral and words.</p> <ul style="list-style-type: none"> a. Read and write numbers to 10 million in numbers. b. Round numbers to the place value appropriate for given contexts. c. Compare and order numbers up to 10 million.

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<p>NECAP</p>	<p>NECAP Number and Operations M (N & O) 5-1 Demonstrates conceptual understanding of rational numbers with respect to whole numbers from 0 to 9,999,999 through equivalency, composition, decomposition, or place value using models, explanations, or other representations; and positive fractional numbers (proper, mixed number, and improper) (halves, fourths, eighths, thirds, sixths, twelfths, fifths, or powers of ten (10, 100, 1000), decimals (to thousandths), or benchmark percents (10%, 25%, 50%, 75%, 100%) as a part to whole relationship in area, set, or linear models using models, explanations, or other representations.</p> <p>M (N & O) 5-2 Demonstrates understanding of the relative magnitude of numbers by ordering, comparing, or identifying equivalent positive fractional numbers, decimals, or benchmark percents within number formats (fractions to fractions, decimals to decimals, or percents to percents); or integers in context using models or number lines.</p>
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