

# MATHEMATICS

## Number Sense

Grade 6	
<p><b>1. Students compare and order fractions, decimals, and mixed numbers. They solve problems involving fractions, ratios, proportions, and percentages.</b></p> <p>6.1.1 Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line</p> <p>6.1.2 Interpret and use ratios in different contexts (e.g., batting averages, miles per hour) to show the relative sizes of two quantities using appropriate notations (<math>a/b</math>, <math>a</math> to <math>b</math>, <math>a:b</math>)</p> <p>6.1.3 Use proportions to solve problems (e.g., determine the value of <math>N</math> if <math>4/7 = N/21</math>, find the length of a side of a polygon similar to a known polygon). Use cross-multiplication as a method for solving such problems, understanding it a multiplication of both sides of an equation by a multiplicative inverse.</p> <p>6.1.4 Calculate given percentages of quantities and solve problems involving discounts at sales, interest earned and tips</p>	<p><b>2. Students calculate and solve problems involving addition, subtraction, multiplication and division of rational numbers.</b></p> <p>6.2.1 Solve problems involving addition, subtraction, multiplication and division of fractions and explain why a particular operation was used for a given situation</p> <p>6.2.2 Explain the meaning of multiplication and division of fractions and perform the calculations (e.g., <math>5/8</math> divided by <math>15/16 = 5/8 \times 16/15 = 2/3</math>)</p> <p>6.2.3 Solve addition, subtraction, multiplication and division problems, including those arising in concrete situations that use positive and negative numbers and combinations of these operations</p> <p>6.2.4 Determine the least common multiple and greatest common divisor of whole numbers. Use them to solve problems with fractions (e.g., to find a common denominator in order to add two fractions or to find the reduced form for a fraction)</p>