

## Grade 5 Proficiency Level Descriptors

### Minimal

Students performing at the minimal level are beginning to apply their mathematics knowledge and skills. They identify simple factors, exponents, fractions, percents, integers, and represent these numbers with limited accuracy. Students order and compare whole numbers on a number line, but struggle with integers, fractions, and decimals. They inaccurately identify prime and composite numbers, common multiples, and factors. Students have a limited understanding of problem solving strategies, divisibility rules, and use of estimation. They may solve simple problems using multiplication and division of whole numbers, and addition and subtraction of simple fractions and decimals. Their ability to predict patterns with whole numbers, decimals, and fractions is developing. They have a limited understanding of the order of operations. Students may identify, but not yet classify relationships between geometric lines and shapes. They inconsistently locate ordered pairs in a coordinate plane and inaccurately use formulas to calculate the area of polygons. Students may construct and interpret simple graphs, but may have difficulty identifying the mean, median, mode, or range. They have difficulty with basic concepts of probability.

### Partial

Students performing at the partial level inconsistently apply their mathematics knowledge and skills. They may be able to identify and represent some factors, exponents, fractions, percents and integers. They attempt to order, compare, and model relationships of integers, fractions, and decimals. Students identify some prime and composite numbers, common multiples and factors. They may have difficulty determining appropriate problem solving strategies, divisibility rules, and use of estimation. Students begin to solve problems using multiplication and division of whole numbers, addition and subtraction of simple fractions and decimals, and interpretation of remainders. They may be able to predict and extend patterns with whole numbers, decimals and fractions. They are starting to evaluate and simplify problems using algebraic expressions and inequalities, and order of operations, but not always in the correct order. They occasionally identify and classify relationships between basic geometric lines and shapes and locate ordered pairs in a coordinate plane. They are inconsistent when calculating the area of polygons, but if given the formulas, they may find surface area and volume. Students construct and interpret data from simple graphs, but may have difficulty identifying and calculating the mean, median, mode, or range. They recognize and apply some basic concepts of probability.

## Grade 5 Proficiency Level Descriptors

### **Sufficient**

Students performing at the sufficient level apply mathematics knowledge and skills appropriately. They identify and represent factors, exponents, fractions, percents and integers. Students order, compare, and model relationships of integers, fractions, and decimals, and most identify prime and composite numbers, common multiples and factors. They determine appropriate problem solving strategies, divisibility rules, and use of estimation. Students solve problems using multiplication and division of whole numbers, addition and subtraction of simple fractions and decimals, and interpretation of remainders. Students predict and extend patterns with whole numbers, decimals and fractions. They evaluate, simplify, and compute problems using algebraic expressions, inequalities and order of operations. They identify, classify, and describe relationships between geometric lines and shapes, and locate and write ordered pairs in a coordinate plane. They use formulas to calculate the area of polygons, surface area, and volume. Students construct, interpret and analyze data using appropriate graphs, and identify and calculate the mean, median, mode, and range. They recognize and apply basic concepts of probability.

### **Substantial**

Students performing at the substantial level consistently apply mathematics knowledge and skills appropriately. They accurately represent factors, exponents, fractions, percents, and integers, and skillfully order, compare, and model relationships of integers, fractions, and decimals. They identify and understand the relationship among prime and composite numbers, common multiples and factors. They appropriately apply problem solving strategies, divisibility rules, and use of estimation. Students solve problems fluently using multiplication and division of whole numbers, addition and subtraction of simple fractions and decimals, and interpretation of remainders. Students extend patterns with whole numbers, decimals and fractions. They readily evaluate, simplify, and compute problems using algebraic expressions, inequalities, and order of operations. They classify and describe relationships between geometric lines and shapes with ease and accurately locate and write ordered pairs in a coordinate plane. Students derive and apply formulas to calculate area of polygons, find surface area, and volume. They consistently construct, interpret and analyze data using appropriate graphs, and accurately calculate the mean, median, mode, and range. They easily apply concepts of probability.