<u>**Grade 7 Math**</u>

DOES NOT MEET THE STANDARDS
Students at this level of mathematics succeed at few of the most fundamental mathematics skills of the Minnesota Academic Standards. Some of the skills these students demonstrate inconsistently include the following:
  • **Mathematical reasoning skills** such as representing the problem with numbers or pictures; selecting the correct mathematical processes to find the solution
  • **Number sense and computation skills** such as comparing integers; solving problems involving addition, subtraction, multiplication, and division
  • **Pattern and algebraic thinking skills** such as extending simple arithmetic progressions; identifying rates of change
  • **Data and probability skills** such as matching a graph and data set
  • **Spatial, geometry, and measurement skills** such as choosing appropriate units of measurement; identifying quadrilaterals; recognizing two-dimensional diagrams of three-dimensional shapes; identifying lines of reflection

PARTIALLY MEETS THE STANDARDS
Students at this level of mathematics partially meet the mathematics skills of the Minnesota Academic Standards. Some of the skills these students can demonstrate frequently include the following:
  • **Mathematical reasoning skills** such as communicating how to solve problems using mathematical sentences and visual representations that support the results; providing a partial understanding of the solution
  • **Number sense and computation skills** such as comparing and computing with rational numbers; translating between scientific and standard notation; performing operations with exponents
  • **Pattern and algebraic thinking** skills such as computing with simple formulas; performing order of operations; determining rate of change from a graph
  • **Data and probability skills** such as computing simple probability; determining the median of data sets; analyzing scatter plots
  • **Spatial, geometry, and measurement skills** such as identifying transformations; computing changes in size using scale factors; calculating measurement conversions

MEETS THE STANDARDS
Students at this level of mathematics meet the mathematics skills of the Minnesota Academic Standards. Some of the skills these students can demonstrate consistently include the following:
  • **Mathematical reasoning skills** such as organizing and recording mathematical processes used in solving problems logically; communicating why solution steps are valid to determine logical solutions
  • **Number sense and computation skills** such as converting among forms of numbers, like fractions, decimals, and percents, to solve problems; solving problems computing with rational numbers; solving problems involving percent of increase
  • **Pattern and algebraic thinking skills** such as solving problems with simple formulas; applying correct order of operations to generate algebraic expressions; recognizing equivalent expressions; solving problems to demonstrate understanding of rate of change from a graph
  • **Data and probability skills** such as expressing probability as a fraction, decimal, or percent; understanding the relationship between experimental and theoretical probability; distinguishing mean, median, and mode
  • **Spatial, geometry, and measurement skills** such as classifying quadrilaterals by attributes; calculating the circumference of circles; calculating the area of sectors of circles; solving problems with scale factors

EXCEEDS THE STANDARDS
Students at this level of mathematics exceed the mathematics skills of the Minnesota Academic Standards. Some of the skills these students demonstrate very consistently include the following:

- **Mathematical reasoning skills** such as translating word problems into mathematical language; evaluating the reasonableness of solutions and interpreting the results; organizing, recording, and communicating math ideas coherently
- **Number sense and computation skills** such as recalling that square and square root are inverse operations
- **Pattern and algebraic thinking skills** such as demonstrating an understanding of rate of change in real-world problems
- **Data and probability skills** such as understanding the impact on statistical measures when data is changed
- **Spatial, geometry, and measurement skills** such as solving problems using relationships among radius, diameter, area, and circumference; recalling metric equivalents