**Performance Task Descriptions**

**Third Grade:**

* **Birthday Celebration: This Performance Task focuses on Operations and Algebraic Thinking and Base Ten. The core idea for this task is that students understand numbers enable them to use the four operations to combine and separate quantities.**
* **Cards for Soldiers: This Performance Task focuses on Operations and Algebraic Thinking. The core ideas for this task are that students will understand how to use the four operations to solve multi-step problems; how to find an unknown in an equation; and how to use various strategies that are helpful in solving problems.**
* **Favorite Baseball Team: This Performance Task focuses on Operations and Algebraic Thinking and Measurement and Data. The core ideas for this task are that students will understand the need to collect accurate data and use computation to determine the answer to the big question; how to collect, display and summarize data; and how to use data, personal perspective and additional resources to justify an answer.**
* **Snow Cones: This Performance Task focuses on Operations and Algebraic Thinking and Fractions and Money. The core ideas for this task are that students will understand numbers enable them to use place value of digits to comprehend quantities, sequences and estimation; strategies are useful in solving problems; and the value of money.**

**Sixth Grade:**

* **Ratios with Recipes: This Performance Task focuses on Ratios. The core ideas for this task are that students will understand operations involving fractions; equivalent fractions; ratio reasoning; and proportional relationships.**
* **Sophie’s Choice: This Performance Task focuses on Exponents. The core ideas for this task are that students will understand the use of exponents in mathematical expressions; how to reason logically with multiplication; how to extend previous understanding of multiplication when solving real-world problems; expressions in different forms can be equivalent, and they can use the properties of operations to rewrite expressions in equivalent forms; and how to rewrite expressions in different ways: written descriptions, creating a table, or creating a graph.**
* **Souvenir Storage: This Performance Task focuses on Volume. The core ideas for this task are that students will understand how to find the volume of a right rectangular prism; how to multiply fractions to find volume; and how to apply the formula *V=lwh*.**
* **The Lemonade Stand: This Performance Task focuses on Integers. The core ideas for this task are that students will understand integers can be positioned on a number line; quantities have opposite directions on a number line; and positive and negative numbers can represent quantities in a real world context.**

**Algebra 1:**

* **Expressions with a Picture Frame: This Performance Task focuses on Structure of Expressions. The core ideas for this task are that students will understand how to rewrite expressions in different equivalent forms; how to rewrite algebraic expressions in different equivalent forms using factoring techniques; and how to simplify expressions.**
* **Polynomials in the Garden: This Performance Task focuses on Operations with Polynomials. The core ideas for this task are that students will understand the laws of exponents; the definition of a polynomial; polynomials are closed under the operations of addition, subtraction and multiplication; and how to simplify expressions by combining like terms.**
* **Quadratics and Volleyball: This Performance Task focuses on Solving Quadratic Equations in One Variable. The core ideas for this task are that students will understand the quadratic formula; the process of completing the square; various methods to solving a quadratic equation; square rooting both sides of an equation yields two solutions; and the quadratic formula can be used to find complex solutions.**
* **Systems with Food: This Performance Task focuses on Systems of Equations. The core ideas for this task are that students will understand the properties for transforming equations; how to create equations and inequalities in one variable and use them to solve problems; how to create equations in two variables to represent relationships between quantities and find solutions; and how to graph equations on a coordinate axes.**

**Algebra 2:**

* **Factoring a Wood Sculpture: This Performance Task focuses on Factoring and Finding Zeros. The core ideas for this task are that students will understand zeros of polynomial functions; factors of polynomials; and how multiple zeros affect a graph.**
* **Rational Exponents with Pool Dimensions: This Performance Task focuses on Rational Exponents. The core ideas for this task are that students will understand the laws of exponents; rational numbers can be used as exponents; and a rational exponent represents both an integer exponent and an nth root.**
* **Volume of the Coffee Mug Container: This Performance Task focuses on Long Division and the Remainder Theorem. The core ideas for this task are that students will understand the long division process; factors of polynomials; functions can be represented in a variety of ways; and the order arranging terms when dividing polynomials.**
* **Population Growth: This Performance Task focuses on Solving Radical Equations. The core ideas for this task are that students will understand how to solve equations; why isolating a variable is important; how to eliminate a rational exponent; extraneous solutions; and how to eliminate a radical sign.**

**Geometry:**

* **Angle Measures: This Performance Task focuses on the Triangle Angle-Sum Theorem. The core ideas for this task are that students will understand the sum of the angle measures of a triangle is always the same; any exterior angle of a triangle has a special relationship with the two remote interior angles of a triangle; and angle relationships given parallel lines and transversals.**
* **Designing a Package: This Performance Task focuses on Applying Geometric Methods to Solve Design Problems. The core ideas for this task are that students will understand attributes of geometric figures; volume of three-dimensional shapes; and volume of a sphere can be found when its radius is known.**
* **Proving a Polygon: This Performance Task focuses on Using Coordinates to Prove Simple Geometric Figures. The core ideas for this task are that students will understand that the relationship between parallel or perpendicular lines can sometimes be used to write the equation of a line; slopes of parallel lines are equal; slopes of perpendicular lines must be opposite reciprocals of each other; and using the formula for slope, distance and midpoint can help classify figures in a coordinate plane.**
* **Right Triangles: This Performance Task focuses on the Pythagorean Theorem. The core ideas for this task are that students will understand the sum of the squares of the lengths of the legs is equal to the square of the length of the hypotenuse in a right triangle; and the sum of the squares of the lengths of two sides of a triangle is equal to the square of the third side when the triangle is a right triangle.**