 **South Dakota Grade 7 Mathematics Threshold Descriptors**

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| **Grade 7 Priority Cluster: Ratios and Proportional Relationships (Target(s) – A)** |
| Threshold 2 | Threshold 3 | Threshold 4 |
| * Identify proportional relationships presented in equation formats and find unit rates involving whole numbers
 | * Represent proportional relationships in graphs and tables and solve one-step rate-related problems
 | * Solve real-world problems involving proportional relationships that require one step with measurement conversions
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| **Grade 7 Priority Cluster: The Number System (Target(s) –B)** |
| Threshold 2 | Threshold 3 | Threshold 4 |
| * Convert between familiar fractions and decimals
 | * Solve mathematical problems using addition, subtraction, and multiplication on rational numbers.
* Understand that (-1)(-1) = 1.
* Convert common fractions and fractions with denominators that are a factor of a power of 10 to decimals
 | * Solve real-world problems with integers and proper fractions, using addition, multiplication, subtraction, and division
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| **Grade 7 Priority Cluster: Expressions and Equations (Target(s) – C, D)** |
| Threshold 2 | Threshold 3 | Threshold 4 |
| * Apply properties of operations to expand linear expressions with integer coefficients.
* Solve multi-step problems with decimal numbers. Solve equations in the form of px + q = r, where p, q, and r are decimal numbers
 | * Add, subtract, and factor linear expressions with decimal coefficients.
* Graph the solution set to a given inequality in the form of x > p or x < p, where p is a rational number.
* Understand that rewriting an expression can shed light on how quantities are related in a familiar problem-solving context with a moderate degree of scaffolding.
* Use variables to reason with quantities in real-world and mathematical situations with a high degree of scaffolding
 | * Construct inequalities with two variables to solve problems.
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| **Grade 7 Supporting Cluster: Geometry (Target(s) – E, F)** |
| Threshold 2 | Threshold 3 | Threshold 4 |
| * Describe geometric shapes with given conditions. Use vertical angles expressed as numerical measurements to solve problems.
* Calculate the area of a circle when the formula is provided and the area of quadrilaterals
 | * Create a scale drawing of a given figure when a scale factor is given.
* Determine the surface area of a right prism.
* Use vertical angles expressed as variables to solve two-step problems
 | * Describe the two-dimensional figures that result from slicing spheres and cones
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| **Grade 7 Supporting Cluster: Statistics and Probability (Target(s) – G, H, I)** |
| Threshold 2 | Threshold 3 | Threshold 4 |
| * Determine whether or not a sample is random. Find the range of a set of data about a given population.
* Approximate the probability of a chance event by collecting data
 | * Use random sampling to draw inferences about a population in familiar contexts.
* Informally assess the degree of visual overlap of two numerical data distributions.
* Calculate the theoretical probability of a compound event
 | * Generate multiple samples (or simulated samples) of the same size.
* Determine which measures of variability should be used to draw informal comparative inferences about two populations.
* Construct a simulation experiment and generate frequencies for compound events.
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