 **South Dakota Grade 6 Mathematics Threshold Descriptors**

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| **Grade 6 Priority Cluster: Ratios and Proportional Relationships (Target(s) – A)** |
| Threshold 2 | Threshold 3 | Threshold 4 |
| * Find unit rates given two whole number quantities where one evenly divides the other
 | * Solve unit rate problems.
* Solve percent problems by finding the whole, given a part and the percent.
* Describe a ratio relationship between any two number quantities and understand the concept of unit rate in problems (denominators less than or equal to 12).
 | * Solve unfamiliar or multi-step problems by finding the whole, given a part and the percent.
* Understand and explain ratio relationships between any two number quantities.
* Identify relationships between models or representations
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| **Grade 6 Priority Cluster: The Number System (Target(s) –B, C)** |
| Threshold 2 | Threshold 3 | Threshold 4 |
| * Evaluate expressions with and without variables and without exponents.
* Write one- and two-step algebraic expressions introducing a variable.
* Solve one-variable equations and inequalities of the form x + p =/≤/≥/</> q or px =/≤/≥/</> q, where p and q are nonnegative rational numbers.
* Given a table of values for a linear relationship (y = kx or y = x ± c), create the equation
 | * Write and evaluate numerical expressions without exponents and expressions from formulas in real- world problems.
* Identify equivalent expressions.
* Write one-variable equations and inequalities of the form x + p =/≤/≥/</> q or px =/≤/≥/</> q, where p and q are nonnegative rational numbers.
* Graph solutions to equations and inequalities on the number line.
* Create the graph, table, and equation for a linear relationship (y = kx or y = x ± c) and make connections between the representations
 | * Using the properties of operations, show why two expressions are equivalent.
* Solve equations and inequalities of the form x + p =/≤/≥/</> q or px =/≤/≥/</> q, where p and q are rational numbers.
* Create the graph, table, and equation for nonlinear polynomial relationships, making connections between the representations
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| **Grade 6 Priority Cluster: Expressions and Equations (Target(s) – E, F, G)** |
| Threshold 2 | Threshold 3 | Threshold 4 |
| * Recognize equivalent fractions using visual models.
* Use visual fraction models to represent a problem.
* Express a fraction with denominator 10 as an equivalent fraction with denominator 100
 | * Generate equivalent fractions using visual models. Identify and generate equivalent forms of a fraction with like denominators.
* Add two fractions with respective denominators 10 and 100
 | * Compare two fractions with different numerators and different denominators using <, >, and =.
* Compare two decimals to the hundredths using <, >, and = or a number line and justify the conclusions by using visual models
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| **Grade 6 Supporting Cluster: The Number System (Target(s) –D)** |
| Threshold 2 | Threshold 3 | Threshold 4 |
| * Order fractions and integers.
* Place integer pairs on a coordinate plane with axis increments of 2, 5, or 10.
 | * Place points with rational coordinates on a coordinate plane and combine absolute value and ordering, with or without models (|-3|<|-5|).
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| **Grade 6 Supporting Cluster: Geometry (Target(s) – H)** |
| Threshold 2 | Threshold 3 | Threshold 4 |
| * Find areas of special quadrilaterals and triangles. Draw polygons in the four-quadrant plane
 | * Find areas of quadrilaterals and other polygons that can be decomposed into three or fewer triangles.
* Find the volume of right rectangular prisms with fractional or mixed number side lengths
 | * Solve problems by finding surface areas of triangular or rectangular prisms and triangular or rectangular pyramids
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| **Grade 6 Supporting Cluster: Statistics and Probability (Target(s) – I, J)** |
| Threshold 2 | Threshold 3 | Threshold 4 |
| * Understand that questions that lead to variable responses are statistical questions and vice versa.
* Identify a reasonable measure of central tendency for a given set of numerical data.
* Find mean and median
 | * Identify a reasonable center and spread for a given context and understand how this relates to the overall shape of the data distribution.
* Understand that a measure of center summarizes all of its values with a single number.
* Summarize or display data in box plots. Find the interquartile range.
* Use range and measures of center to describe the shape of the data distribution as it relates to a familiar context.
* Pose statistical questions
 | * Predict effects on mean and median given a change in data points.
* Complete a data set with given measures (e.g., mean, median, mode, interquartile range).
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