Expectations and Outcomes

SCHOOL DISTRICT OF BLACK RIVER FALLS
Inspiring Excellence

Grade Level/Course: Eighth Grade

Content Area: Math

Unit Title	Guarantees
Unit 1: Equations	• Give examples of linear equations in one variable with one solution • Solve linear equations with rational number coefficients, including equations whose solutions require collecting like terms
Unit 2: Transformations	• Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by rotations, reflections and translations • Describe the effect of reflections on two-dimensional figures using coordinates.
Unit 3: Angles and Triangles	• Use informal arguments to establish facts about… the angles created when parallel lines are cut by transversal
Unit 4: Graphing and Writing Linear Equations	• Graph proportional relationships, interpreting the unit rate as the slope of the graph. • Use similar triangles to explain why the slope m is the same between any two district points; derive the equation y = mx + b
Unit 5: Systems of Linear Equations	• Understand that solutions to a system a of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously
Unit 6: Functions	• Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.
Unit 7: Real Numbers and the Pythagorean Theorem	• Use square root and cube root symbols to represent solutions to equations of the form • Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in a real-world and mathematical problems in two and three dimensions.
Unit 8: Volume and Similar Solids	• Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.
Unit 9: Data Analysis and Displays	• Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities.

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	• Know that straight lines are widely used to model relationships between two quantitative variables. • Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies
Unit 10: Exponents	• Know and apply the properties of integer exponents to generate equivalent numerical expressions. • Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities