

8th Grade Math

Unit 1: Real numbers and Exponents

LT	Learning Target	CC	TB								
1A	I can use patterns to show why the properties of exponents work.										
1A.1	I can write and evaluate expressions involving exponents.	8.EE.1	1-2								
1A.2	I can generate equivalent real number expressions by using the laws of exponents.	8.EE.1	1-3,1-4, 1-5								
1B	I can classify numbers in the Real Number system and explain the differences between rational and irrational numbers.										
1B.1	I can convert a repeating decimal to a rational number.	8.NS.1	1-1								
1B.2	I can use inverse operations to solve equations involving squares and cubes.	8.EE.2	1-8								
1B.3	I can use reasoning to estimate the approximate value of an irrational number.	8.NS.2	1-8, 1-9								
1B.4	I can locate, order, and compare real numbers on a number line.	8.NS.2	1-10								
1C	I can apply scientific notation to solve real world problems when applicable.										
1C.1	I can use scientific notation to write equivalent real numbers.	8.EE.3	1-6								
1C.2	I can perform arithmetic calculations with numbers written in scientific notation.	8.EE.4	1-7								

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Unit 2: Expressions and Equations

LT	Learning Target	CC	TB						
2A	I can write, solve, and construct a convincing argument that justifies each step of a solution to a multi-step equation and explain.								
2A.1	I can solve linear equations with rational coefficients.	8.EE.7	2-1						
2A.2	I can write and solve two-step equations.	8.EE.7	2-2, 2-3						
2A.3	I can write and solve multi-step equation.	8.EE.7	2-4, 2-5						
2A.4	I can determine the number of solutions for an equation (none, one, or infinite).	8.EE.7	2-5						

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Unit 3: Linear Equations (two variables)

LT	Learning Target	CC	TB								
3A	I can identify linear vs. nonlinear relationships and explain their differences.										
	3A.1	I can determine if a relationship is linear by determining if there is a constant rate of change.	8.EE.5	3-1							
	3A.2	I can identify the rate of change (slope) from an equation, graph, or data table.	8.EE.5	3-2							
	3A.3	I can make the connection between slope and similar triangles.	8.EE.6	7-6							
3B	I can represent linear relationships in multiple ways.										
	3B.1	I can explain when a relationship is a direct variation in order to generate equations and solve real world problems.	8.EE.5 8.F.4	3-3							
	3B.2	I can identify slope and y-intercept from a graph in order to write the equation of the line.	8.F.3 8.F.4	3-4							
	3B.3	I can graph an equation that represents a real world situation and interpret the meaning of slope and x- and y-intercepts in the context of the situation.	8.F.3 8.F.4	3-4, 3-5							
3C	I can identify the characteristics of a linear function from multiple representations, and use them to prove a relation is a function.										
	3C.1	I can express a linear relation as a table or graph in order to identify the domain, range and whether it is a function.	8.F.1	4-2							
	3C.2	I can represent a function in different ways in order to interpret data points in the context of a real world situation.	8.F.1 8.F.4	4-3, 4-4							
	3C.3	I can compare functions each represented in different ways.	8.F.2 8.F.4	4-5							
	3C.4	I can construct a function in order to find and interpret the rate of change and initial value of the situation.	8.F.4	4-1, 4-6							
3D	I can explain when a function is nonlinear from a variety of representations (table, graph, etc).										
	3D.1	I can prove whether a function is linear or nonlinear.	8.F.1 8.F.3 8.F.5	4-7 4-8							
	3D.2	I can sketch and interpret qualitative graphs.	8.F.5	4-9							

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Unit 4: Systems of Equations

LT	Learning Target	CC	TB								
4A	I can explain why the solution to a system of linear equations is the point of intersection on a coordinate plane.										
	4A.1	I can graph two linear equations on the same coordinate plane in order to estimate the solution to the system.	8.EE.8	3-7							
	4A.2	I can explain the difference between one solution, no solutions, and infinitely many solutions for a system of linear equations.	8.EE.8	3-7							
4B	I can solve a system of two linear equations algebraically.										
	4B.1	I can find the exact solution to a system of linear equations using the Substitution Method.	8.EE.8	3-8							
	4B.2	I can find the exact solution to a system of linear equations using the Elimination Method.	8.EE.8	See Handout							
4C	I can solve real-world problems by writing and solving a system of linear equations.										
	4C.1	I can write a system of two linear equations to solve a real-world problem.	8.EE.8	3-8							
	4C.2	I can choose the most appropriate method for solving a system of linear equations and justify my reasoning.	8.EE.8	3-8							
	4C.3	I can interpret the solution to a system of linear equations in the context of a real-world situation.	8.EE.8	3-8							

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Unit 5: Geometry

LT	Learning Target	CC	TB								
5A	I can apply algebraic concepts to Geometry to find missing angles and side lengths.										
5A.1	I can find angle measures using properties of parallel and perpendicular lines and apply this to triangles.	8.G.5	5-1, 5-3								
5A.2	I can apply the Pythagorean theorem to determine unknown side lengths in the real world.	8.G.6 8.G.7	5-5, 5-6								
5A.3	I can apply the Pythagorean converse to determine if a triangle is a right triangle.	8.G.6	5-5								
5A.4	I can use Pythagorean Theorem to determine the distance between two points on the coordinate plane.	8.G.8	5-7								
5B	I can explain congruence and similarity using properties of transformations and angle measures.										
5B.1	I can perform and describe the effects of transformations on 2-dimensional figures on the coordinate plane.	8.G.1 8.G.3	6-1, 6-2, 6-3, 6-4								
5B.2	I can perform and describe a sequence of transformations to prove the congruence or similarity of two shapes.	8.G.2 8.G.4	7-1, 7-2, 7-3								
5B.3	I can prove whether or not two triangles are similar using angle measure or side length.	8.G.5	7-4, 7-5								
5C	I can explain each part of a volume formula, and explain why each is necessary to find the volume of the given shape.										
5C.1	I can apply the formula for the volume of a cylinder to solve real world problems.	8.G.9	8-1								
5C.2	I can apply the formula for the volume of cone to solve real world problems.	8.G.9	8-2								
5C.3	I can apply the formula for the volume of a sphere to solve real-world problems.	8.G.9	8-3								