North Carolina CTE

Introduction to Mathematics (2010): Grades 9, 10, 11, 12

Adopted 2010

Understand rational numbers. OIM.N.1	1. **Compare integers, decimals and fractions.** OIM.N.1.1
	2. **Identify equivalent fractions, decimals, and percents.** OIM.N.1.2
	3. **Identify absolute values and opposites.** OIM.N.1.3
	4. **Use order of operations to simplify numerical expressions.** OIM.N.1.4
	5. **Identify the greatest common factor and least common multiple.** OIM.N.1.5
	6. **Use calculators to solve non-negative integer exponential expressions.** OIM.N.1.6
Apply mathematical operations with rational numbers to solve problems. OIM.N.2	1. **Use calculators to solve real world fraction and mixed number problems.** OIM.N.2.1
	2. **Use calculators to solve real world decimal problems.** OIM.N.2.2
	3. **Use calculators to solve real world integer problems.** OIM.N.2.3
	4. **Use addition, subtraction, multiplication and division with calculators to evaluate algebraic expressions.** OIM.N.2.4
Apply ratios, proportions and percents to solve problems. OIM.N.3	1. **Use standard ratio notation for expressing ratios in part-to-part or a part-to-whole relationship.** OIM.N.3.1
	2. **Use proportional reasoning to solve real world problems including recipes and unit rates.** OIM.N.3.2
	3. **Use appropriate strategies to solve percent problems.** OIM.N.3.3
	4. **Use scale factors and models to solve real world problems.** OIM.N.3.4
Use properties of two- and three-dimensional fig pr	1. **Calculate perimeter of polygons and circumference of circles to solve real world problems.** OIM.G.1.1
	Calculate areas of polygons and circles to solve real world problems. OIM.G.1.2

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	3. Calculate volume of rectangular prisms & cylinders. OIM.G.1.3
	4. Use the square root of the area to identify the length of the side of a square. OIM.G.1.4
	5. Use the Pythagorean Theorem to solve real world problems. OIM.G.1.5
Apply time and measurement skills to solve problems. OIM.M.1	1. Use analog and digital clocks to tell time. OIM.M.1.1
	2. Identify regularly scheduled activities based on time. OIM.M.1.2
	3. Use time to solve problems. OIM.M.1.3
	4. Use a calendar to solve problems. OIM.M.1.4
	5. Use standard measurement tools to measure length, capacity, weight and temperature. OIM.M.1.5
Apply algebraic properties to solve problems. OIM.A.1	1. Use appropriate strategies to solve one and two-step equations resulting in positive solutions in real world OIM.A.1.1
	2. Represent inequalities in real world situations. OIM.A.1.2
	3. Use appropriate strategies to solve one and two-step inequalities using whole numbers in real world contexts. OIM.A.1.3
	4. Illustrate the distributive property using area models. OIM.A.1.4
	5. Understand the use of the distributive property and combining like terms to write equivalent algebraic expressions. OIM.A.1.5
Understand patterns and relationships. OIM.A.2	1. Understand the use of the Cartesian Coordinate Plane to graph and identify ordered pairs. OIM.A.2.1
	2. Represent patterns in real world situations using a table, graph, or equation. OIM.A.2.2
	3. Identify the slope given a table, graph, or equation. OIM.A.2.3
	4. Represent the equation of a line in slope-intercept form, given the slope and y-intercept. OIM.A.2.4
	5. Represent a linear equation graphically given the slope and y-intercept. OIM.A.2.5
	6. Represent ordered pairs and linear equations. OIM.A.2.6

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Understand data in terms of graphical displays, measures of center and range. OIM.S.1

1. **Interpret data from circle graphs, bar graphs, pictographs, maps, and scatter plots, in context.** OIM.S.1.1
2. **Calculate the mean, median, mode and range of a data set.** OIM.S.1.2
3. **Classify type (positive, negative, no relation) of association of data in scatterplots.** OIM.S.1.3
4. **Represent trends on scatterplots when appropriate, with a linear model.** OIM.S.1.4