

Integrated Math

State Standard Number	State Standard Area/Description	Unit Name	Course Topic Description
M1.1	Solving problems		
M1.1.A	Select and justify functions and equations to model and solve problems.	Operations	Number Sense and Problem Solving
M1.1.B	Solve problems that can be represented by linear functions, equations, and inequalities.	Algebraic Sense	Solving single-step equations, Solving two-step equations, Solving & Writing Inequalities, Graphing Inequalities
M1.1.C	Solve problems that can be represented by a system of two linear equations or inequalities.	Algebraic Sense	Systems of Equations
M1.1.D	Solve problems that can be represented by exponential functions and equations.		
M1.2	Characteristics and behaviors of functions		
M1.2.A	Determine whether a relationship is a function and identify the domain, range, roots, and independent and dependent variables.	Algebraic Sense	Section 6
M1.2.B	Represent a function with a symbolic expression, as a graph, in a table, and using words, and make connections among these representations.	Algebraic Sense	Section 6
M1.2.C	Evaluate $f(x)$ at a (i.e., $f(a)$) and solve for x in the equation $f(x) = b$.	Algebraic Sense	Section 2
M1.2.D	Plot points, sketch, and describe the graphs of functions of the form $f(x) = a/x + b$.	Algebraic Sense	Section 6
M1.3	Linear functions, equations, and relationships		

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M1.3.A	Write and solve linear equations and inequalities in one variable.	Algebraic Sense	Solving single-step equations, Solving two-step equations, Solving & Writing Inequalities,
M1.3.B	Describe how changes in the parameters of linear functions and functions containing an absolute value of a linear expression affect their graphs and the relationships they represent.	Geometric Movement	Section 2
M1.3.C	Identify and interpret the slope and intercepts of a linear function, including equations for parallel and perpendicular lines.	Geometric Movement	Section 1
M1.3.D	Write and graph an equation for a line given the slope and the y-intercept, the slope and a point on the line, or two points on the line, and translate between forms of linear equations.	Algebraic Sense	Section 6
M1.3.E	Write and solve systems of two linear equations and inequalities in two variables.	Algebraic Sense	Systems of Equations
M1.3.F	Find the equation of a linear function that best fits bivariate data that are linearly related, interpret the slope and y-intercept of the line, and use the equation to make predictions.		
M1.3.G	Describe the correlation of data in scatterplots in terms of strong or weak and positive or negative.	Probability 2	Data

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M1.3.H	Determine the equation of a line in the coordinate plane that is described geometrically, including a line through two given points, a line through a given point parallel to a given line, and a line through a given point perpendicular to a given line.	Geometric Movement	Section 1
M1.4	Proportionality, similarity, and geometric reasoning		
M1.4.A	Distinguish between inductive and deductive reasoning.	Geometric Figures	Section 3
M1.4.B	Use inductive reasoning to make conjectures, to test the plausibility of a geometric statement, and to help find a counterexample.	Geometric Figures	Section 3
M1.4.C	Use deductive reasoning to prove that a valid geometric statement is true.	Geometric Figures	Section 3
M1.4.D	Determine and prove triangle similarity.		
M1.4.E	Know, prove, and apply theorems about parallel and perpendicular lines.	Geometric Figures	Perpendicular and Parallel Lines
M1.4.F	Know, prove, and apply theorems about angles, including angles that arise from parallel lines intersected by a transversal.	Geometric Figures	Perpendicular and Parallel Lines

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M1.4.G	Explain and perform basic compass and straightedge constructions related to parallel and perpendicular lines.	Geometric Figures	Perpendicular and Parallel Lines
M1.5	Data and distributions		
M1.5.A	Use and evaluate the accuracy of summary statistics to describe and compare data sets.	Probability 2	Data
M1.5.B	Describe how linear transformations affect the center and spread of univariate data.		
M1.5.C	Make valid inferences and draw conclusions based on data.	Probability 2	Data
M1.6	Numbers, expressions, and operations		
M1.6.A	Know the relationship between real numbers and the number line, and compare and order real numbers with and without the number line.	Number Sense	Whole Numbers, Integers, Rational Numbers
M1.6.B	Determine whether approximations or exact values of real numbers are appropriate, depending on the context, and justify the selection.	Operations	Estimation

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M1.6.C	Recognize the multiple uses of variables, determine all possible values of variables that satisfy prescribed conditions, and evaluate algebraic expressions that involve variables.	Algebraic Sense	Intro to Algebraic Expressions
M1.6.D	Solve an equation involving several variables by expressing one variable in terms of the others.	Measurement	Area of a Parallelogram
M1.7	Additional Key Content		
M1.7.A	Sketch the graph for an exponential function of the form $y = ab$ to the n power where n is an integer, describe the effects that changes in the parameters a and b have on the graph, and answer questions that arise in situations modeled by exponential functions.		
M1.7.B	Find and approximate solutions to exponential equations.		
M1.7.C	Interpret and use integer exponents and square and cube roots, and apply the laws and properties of exponents to simplify and evaluate exponential expressions.	Number Sense	Sections 5, 6
M1.7.D	Express arithmetic and geometric sequences in both explicit and recursive forms, translate between the two forms, explain how rate of change is represented in each form, and use the forms to find specific terms in the sequence.	Algebraic Sense	Section 2
M1.8	Reasoning, problem solving, and communication		

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M1.8.A	Analyze a problem situation and represent it mathematically.)	Operations	Number Sense and Problem Solving
M1.8.B	Select and apply strategies to solve problems.	Operations	Number Sense and Problem Solving
M1.8.C	Evaluate a solution for reasonableness, verify its accuracy, and interpret the solution in the context of the original problem.	Operations	Number Sense and Problem Solving
M1.8.D	Generalize a solution strategy for a single problem to a class of related problems, and apply a strategy for a class of related problems to solve specific problems.	Algebraic Sense	Solving Two-Step Equations
M1.8.E	Read and interpret diagrams, graphs, and text containing the symbols, language, and conventions of mathematics.	Probability 1	Probability
M1.8.F	Summarize mathematical ideas with precision and efficiency for a given audience and purpose.	Probability 1	Probability
M1.8.G	Synthesize information to draw conclusions, and evaluate the arguments and conclusions of others.	Probability 2	Data
M1.8.H	Use inductive reasoning to make conjectures, and use deductive reasoning to prove or disprove conjectures.	Geometric Figures	Section 3