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Grade 8 Algebra 1

to the

Indiana Academic Standards Mathematics: Algebra I

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PS.1: Make sense of problems and persevere in solving them. Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway, rather than simply jumping into a solution attempt. They consider analogous problems and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" and "Is my answer reasonable?" They understand the approaches of others to solving complex problems and identify correspondences between different approaches. Mathematically proficient students understand how mathematical ideas interconnect and build on one another to produce a coherent whole.	The entire textbook is founded on the principles of PS.1: Make sense of problems and persevere in solving them. Throughout the text, students are guided through examples, problems, and real world scenarios. Every question and example given is designed with PS.1 ingrained into the very core of the presentation. The goal of the textbook is to constantly build upon and relate topics to each other in order to create a clear picture of the mathematics contained. For example, please see: **Looking for Pythagoras**: Inv. 1, 2, 3, 4, 5 **Growing, Growing, Growing:** Inv. 1, 2, 3, 4, 5 **Frogs, Fleas, and Painted Cubes:** Inv. 1, 2, 3, 4 **Butterflies, Pinwheels & Wallpaper:** Inv. 1, 2, 3, 4 **Say It with Symbols:** Inv. 1, 2, 3, 4, 5 **It's in the System:** Inv. 1, 2, 3, 4 **Function Junction:** Inv. 1, 2, 3, 4, 5
PS.2: Reason abstractly and quantitatively. Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.	**Looking for Pythagoras:** 5.3: Analyzing Circles **Growing, Growing, Growing:** 3.2: Investing for the Future **Frogs, Fleas, and Painted Cubes:** 1.1: Staking a Claim; 4.2: Measuring Jumps **Butterflies, Pinwheels, and Wallpaper:** 4.1: Focus on Dilations; 4.2: Return of the Super Sleuth; 4.3: Checking Similarity without Transformation, 4.4: Using Similar Triangles **Say it With Symbols:** 3.1: Selling Greeting Cards **It's In the System:** 2.1: Shirts and Caps Again; 2.2: Taco Truck Lunch **Function Junction:** 3.1: Sliding Up and Down; 3.2: Stretching and Flipping Up and Down; 3.3: Sliding Left and Right; 3.4: Getting From Here to There

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PS.3: Construct viable arguments and critique the reasoning of others. Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They analyze situations by breaking them into cases and recognize and use counterexamples. They organize their mathematical thinking, justify their conclusions and communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. They justify whether a given statement is true always, sometimes, or never. Mathematically proficient students participate and collaborate in a mathematics community. They listen to or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.	**Growing, Growing, Growing:** 1.2: Requesting a Reward; 4.1: Making Smaller Ballots **Frogs, Fleas, and Painted Cubes:** 2.4: Quadratic Functions and Their Graphs; 4.3: Painted Cubes **Butterflies, Pinwheels, and Wallpaper:** 1.3: Sliding Around; 3.4: A Special Property of Translations and Half-Turns **Butterflies, Pinwheels, and Wallpaper:** 4.3: Checking Similarity Without Transformations **Say it With Symbols:** 1.2: Thinking in Different Ways; 5.1: Using Algebra to Solve a Puzzle; 5.2: Odd and Even Revisited; 5.3: Squaring Odd Numbers **It's In the System:** 1.1: Shirts and Caps **Function Junction:** 1.3: Taxi Fares, Time Payments, and Step Functions; 4.2: Completing the Square

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PS.4: Model with mathematics. Mathematically proficient students apply the mathematics they know to solve problems arising in everyday life, society, and the workplace using a variety of appropriate strategies. They create and use a variety of representations to solve problems and to organize and communicate mathematical ideas. Mathematically proficient students apply what they know and are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.	**Thinking With Mathematical Models:** 4.1: Vitruvian Man; 5.1: Wood or Steel **Looking for Pythagoras:** 5.2: Analyzing Triangles **Frogs, Fleas, and Painted Cubes:** 4.2: Measuring Jumps **Butterflies, Pinwheels, and Wallpaper:** 4.4: Using Similar Triangles **Say it With Symbols:** 2.1: Walking Together; 2.2: Predicting Profit; 2.3: Making Candles **Function Junction:** 2.1: Arithmetic Sequences
PS.5: Use appropriate tools strategically. Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Mathematically proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. Mathematically proficient students identify relevant external mathematical resources, such as digital content, and use them to pose or solve problems. They use technological tools to explore and deepen their understanding of concepts and to support the development of learning mathematics. They use technology to contribute to concept development, simulation, representation, reasoning, communication and problem solving.	**Thinking With Mathematical Models:** 2.3: Tree Top Fun **Looking for Pythagoras:** 1.1: Driving around Euclid **Growing, Growing, Growing:** 1.1: Making Ballots; 1.2: Requesting a Reward; 1.3: Making a New Offer; 5.5: Revisiting Exponential Functions **Butterflies, Pinwheels, and Wallpaper:** 4.1: Focus on Dilations; 4.2: Return of the Super Sleuth; 4.3: Checking Similarity without Transformation **It's In the System:** 3.1: Comparing Security Services; 3.3: Operating at a Profit **Function Junction:** 3.1: Sliding Up and Down; 3.2: Stretching and Flipping Up and Down; 3.3: Sliding Left and Right; 3.4: Getting From Here to There; 5.1: Properties of Polynomial Expressions and Functions

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PS.6: Attend to precision. Mathematically proficient students communicate precisely to others. They use clear definitions, including correct mathematical language, in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They express solutions clearly and logically by using the appropriate mathematical terms and notation. They specify units of measure and label axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently and check the validity of their results in the context of the problem. They express numerical answers with a degree of precision appropriate for the problem context.	**Thinking With Mathematical Models:** 2.1: Modeling Linear Data Patterns **Looking for Pythagoras:** 4.2: Representing Fractions as Decimals **Growing, Growing, Growing:** 1.2: Requesting a Reward **Frogs, Fleas, and Painted Cubes:** 3.4: Quadratic Functions and Patterns of Change **Say it With Symbols:** 4.1: Pumping Water; 4.2: Area and Profit; 4.4: What's The Function? **It's In the System:** 4.2: What makes a Car Green?
PS.7: Look for and make use of structure. Mathematically proficient students look closely to discern a pattern or structure. They step back for an overview and shift perspective. They recognize and use properties of operations and equality. They organize and classify geometric shapes based on their attributes. They see expressions, equations, and geometric figures as single objects or as being composed of several objects.	**Thinking With Mathematical Models:** 1.3: Custom Construction Parts; 3.1: Rectangles With Fixed Area **Looking for Pythagoras:** 4.3: Representing Decimals as Fractions **Growing, Growing, Growing:** 1.3: Making a New Offer; 2.1: Killer Plant Strikes Lake Victoria; 4.3: Cooling Water; 5.1: Looking for Patterns Among Exponents **Butterflies, Pinwheels, and Wallpaper:** 3.1: Flipping on a Grid; 3.2: Sliding on a Grid; 3.3: Spinning on a Grid **Function Junction:** 3.1: Sliding Up and Down; 3.2: Stretching and Flipping Up and Down; 3.3: Sliding Left and Right

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PS.8: Look for and express regularity in repeated reasoning. Mathematically proficient students notice if calculations are repeated and look for general methods and shortcuts. They notice regularity in mathematical problems and their work to create a rule or formula. Mathematically proficient students maintain oversight of the process, while attending to the details as they solve a problem. They continually evaluate the reasonableness of their intermediate results.	**Thinking With Mathematical Models:** 3.1: Rectangles With Fixed Area; 3.2: Distance, Speed and Time **Looking for Pythagoras:** 2.1: Looking for Squares **Growing, Growing, Growing:** 2.1: Killer Plant Strikes Lake Victoria **Frogs, Fleas, and Painted Cubes:** 2.2: Changing Dimensions; 2.3: Factoring Quadratic Expressions **Butterflies, Pinwheels, and Wallpaper:** 3.3: Spinning on a Grid; 3.5: Parallel Lines, Transversals, and Angle Sums **It's In the System:** 2.1: Shirts and Caps Again **Function Junction:** 4.3: The Quadratic Formula; 5.2: Combining Profit Functions; 5.3: Product Time
ALGEBRA I	
REAL NUMBERS AND EXPRESSIONS	
AI.RNE.1: Understand the hierarchy and relationships of numbers and sets of numbers within the real number system.	**Looking for Pythagoras:** 4.4: Getting Real
AI.RNE.2: Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.	**Say It With Symbols:** 5.2: Odd and Even Revisited
AI.RNE.3: Rewrite and evaluate numeric expressions with positive rational exponents using the properties of exponents.	**Growing, Growing, Growing:** 5.2: Rules of Exponents
AI.RNE.4: Simplify square roots of non-perfect square integers and algebraic monomials.	**Looking for Pythagoras:** 4.2 Looking for Squares **It's in the System:** 3.3: Operating at a Profit **Function Junctions:** 4.1: Applying Square Roots; 4.2: Completing the Square; 4.3: The Quadratic Formula; 4.4: Complex Numbers
AI.RNE.5: Simplify algebraic rational expressions, with numerators and denominators containing monomial bases with integer exponents, to equivalent forms	**Growing, Growing, Growing:** 5.2: Rules of Exponents

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AI.RNE.6: Factor common terms from polynomials and factor polynomials completely. Factor the difference of two squares, perfect square trinomials, and other quadratic expressions.	**Function Junction:** 3.4: Getting From Here to There; 4.1: Applying Square Roots; 4.2: Completing the Square; 4.3 The Quadratic Formula; 5.4: The Factor Game Revisited
AI.RNE.7: Understand polynomials are closed under the operations of addition, subtraction, and multiplication with integers; add, subtract, and multiply polynomials and divide polynomials by monomials.	**Function Junction:** 5.2: Combining Profit Functions: Operating with Polynomials I; 5.3: Product Time: Operating With Polynomials II
FUNCTIONS	
AI.F.1: Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. Understand that if f is a function and x is an element of its domain, then f(x) denotes the output of f corresponding to the input x. Understand the graph of f is the graph of the equation y = f(x).	**Function Junction:** 1.1: Filling Functions; 1.2: Domain, Range, and Function Notation
AI.F.2: Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear, has a maximum or minimum value). Sketch a graph that exhibits the qualitative features of a function that has been verbally described. Identify independent and dependent variables and make predictions about the relationship.	**Function Junction:** 1.2: Domain, Range, and Function Notation; 1.3 Taxi Fares, Time Payments, and Step Functions
AI.F.3: Identify the domain and range of relations represented in tables, graphs, verbal descriptions, and equations.	**Function Junction:** 1.2: Domain, Range, and Function Notation
AI.F.4: Understand and interpret statements that use function notation in terms of a context; relate the domain of the function to its graph and to the quantitative relationship it describes.	**Function Junction:** 1.2: Domain, Range, and Function Notation

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LINEAR EQUATIONS, INEQUALITIES, AND FUNCTIONS	
AI.L.1: Understand that the steps taken when solving linear equations create new equations that have the same solution as the original. Solve fluently linear equations and inequalities in one variable with integers, fractions, and decimals as coefficients. Explain and justify each step in solving an equation, starting from the assumption that the original equation has a solution. Justify the choice of a solution method.	**It's In the System:** 3.1: Comparing Security Services; 3.3: Operating at a Profit
AI.L.2: Represent real-world problems using linear equations and inequalities in one variable and solve such problems. Interpret the solution and determine whether it is reasonable.	**Thinking With Mathematical Models:** 2.4: Boat Rental Business **Growing, Growing, Growing:** **It's In the System:** 3.1: Comparing Security Services; 3.3: Operating at a Profit
AI.L.3: Represent real-world and other mathematical problems using an algebraic proportion that leads to a linear equation and solve such problems.	**Thinking With Mathematical Models:** 2.1 Modeling Linear Data Patterns; 2.2 Up and Down the Staircase
AI.L.4: Represent linear functions as graphs from equations (with and without technology), equations from graphs, and equations from tables and other given information (e.g., from a given point on a line and the slope of the line).	**Thinking With Mathematical Models:** 3.3: Planning a Field Trip; 3.4: Modeling Data Patterns **Growing, Growing, Growing:** 1.1: Making Ballots; 1.2: Requesting a Reward; 1.3: Making a New Offer; 2.1: Killer Plant Strikes Lake Victoria; 2.2 Growing Mold; 2.3: Studying Snake Populations; 3.1: Reproducing Rabbits; 3.2: Investing for the Future; 3.3: Making a Difference; 4.1: Making Smaller Ballots; 4.2: Fighting Fleas; 4.3: Cooling Water **It's in the System:** 1.1: Shirts and Caps; 1.2: Connecting Ax + By = C and Y = mx + b; 1.3: Booster Club Members; 2.1 Shirts and Caps Again; 2.3: Solving Systems by Combining Equations; 4.2: What Makes a Car Green; 4.4: Miles of Emissions

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AI.L.5: Represent real-world problems that can be modeled with a linear function using equations, graphs, and tables; translate fluently among these representations, and interpret the slope and intercepts.	**Thinking With Mathematical Models:** 1.2: Bridge Length and Strength; 1.3: Custom Construction Parts **Frogs, Fleas, and Painted Cubes:** 1.1: Staking a Claim; 1.2: Reading Graphs and Tables; 1.3: Writing an Equation; 2.1: Trading Land; 2.4: Quadratic Functions and Their Graphs; 4.1: Tracking a Ball; 4.2: Measuring Jumps; 4.3: Painted Cubes; 4.4: Putting It All Together
AI.L.6: Translate among equivalent forms of equations for linear functions, including slope-intercept, point-slope, and standard. Recognize that different forms reveal more or less information about a given situation.	**Thinking with Mathematical Models:** 3.1: Rectangles With Fixed Area; 3.3: Planning a Field Trip; 3.4: Modeling Data Patterns **Frogs, Fleas, and Painted Cubes:** 2.1: Trading Land; 2.4 Quadratic Functions and Their Graphs
AI.L.7: Represent real-world problems using linear inequalities in two variables and solve such problems; interpret the solution set and determine whether it is reasonable. Solve other linear inequalities in two variables by graphing.	**Thinking with Mathematical Models:** 2.4: Boat Rental Business **It's in the System:** 3.1: Comparing Security Services, 3.2: Solving Linear Inequalities Symbolically
AI.L.8: Solve compound linear inequalities in one variable, and represent and interpret the solution on a number line. Write a compound linear inequality given its number line representation.	**It's in the System:** 4.1: Limiting Driving Miles; 4.2: What Makes a Car Green; 4.3: Feasible Points; 4.4: Miles of Emissions
AI.L.9: Solve absolute value linear equations in one variable.	For related content, please see: **Thinking With Mathematical Models:** 2.4: Boat Rental Business; 2.5: Amusement Park or Movies **Say It With Symbols:** 3.1: Selling Greeting Cards; 3.2: Comparing Costs; 5.1: Using Algebra to Solve a Puzzle **It's In the System:** 3.1: Comparing Security Services; 3.2: Solving Linear Inequalities Symbolically; 3.3: Operation at a Profit

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AI.L.10: Graph absolute value linear equations in two variables.	For related content, please see: **It's In the System:** 1.1: Shirts and Caps: Solving Equations With Two Variables; 1.2: Connecting Ax + By = C and y = mx + b; 1.3: Booster Club Members: Intersecting Lines; 2.1: Shirts and Caps Again: Solving Systems With y = mx + b; 2.2: Taco Truck Lunch: Solving Systems by Combining Equations I; 2.3: Solving Systems by Combining Equations II
AI.L.11: Solve equations and formulas for a specified variable, including equations with coefficients represented by variables.	**Thinking with Mathematical Models:** 2.4: Boat Rental Business **It's in the System:** 3.1: Comparing Security Services, 3.2: Solving Linear Inequalities Symbolically
SYSTEMS OF EQUATIONS AND INEQUALITIES	
AI.SEI.1: Understand the relationship between a solution of a pair of linear equations in two variables and the graphs of the corresponding lines. Solve pairs of linear equations in two variables by graphing; approximate solutions when the coordinates of the solution are non-integer numbers.	**Thinking with Mathematical Models:** 2.5: Amusement Park or Movies **It's in the System:** 1.3: Booster Club Members; 2.1: Shirts and Caps Again; 2.2: Taco Truck Lunch; 2.3: Solving Systems by Combining Equations
AI.SEI.2: Understand that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions. Solve pairs of linear equations in two variables using substitution and elimination.	**It's in the System:** 2.3: Solving Systems by Combining Equations
AI.SEI.3: Write a system of two linear equations in two variables that represents a real-world problem and solve the problem with and without technology. Interpret the solution and determine whether the solution is reasonable.	**It's in the System:** 1.1: Shirts and Caps; 1.2: Connecting Ax + By = C and Y = mx + b; 1.3: Booster Club Members; 2.1: Shirts and Caps Again; 2.2: Taco Truck Lunch; 2.3: Solving Systems by Combining Equations; 3.1: Comparing Security Services; 3.3 Operating at a Profit; 4.1: Limiting Driving Miles; 4.2: What Makes a Car Green; 4.3: Feasible Points; 4.4: Miles of Emissions

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AI.SEI.4: Represent real-world problems using a system of two linear inequalities in two variables and solve such problems; interpret the solution set and determine whether it is reasonable. Solve other pairs of linear inequalities by graphing with and without technology.	**It's in the System:** 4.1: Limiting Driving Miles; 4.2: What Makes a Car Green; 4.3: Feasible Points; 4.4: Miles of Emissions
QUADRATIC AND EXPONENTIAL EQUATIONS AND FUNCTIONS	
AI.QE.1: Distinguish between situations that can be modeled with linear functions and with exponential functions. Understand that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals. Compare linear functions and exponential functions that model real-world situations using tables, graphs, and equations.	**Thinking with Mathematical Models:** 1.2: Bridge Length and Strength; 1.3: Custom Construction Parts **Growing, Growing, Growing:** 1.2 Requesting a Reward; 1.3: Making a New Offer; 3.1: Reproducing Rabbits; 3.2: Investing for the Future; 4.1: Making Smaller Ballots; 4.2: Fighting Fleas; 4.3: Cooling Water **Say it With Symbols:** 4.3: Generating Patterns; 4.4: What's the Function?
AI.QE.2: Represent real-world and other mathematical problems that can be modeled with exponential functions using tables, graphs, and equations of the form y = ab^x (for integer values of x > 1, rational values of b > 0 and b ≠ 1); translate fluently among these representations and interpret the values of a and b.	**Thinking with Mathematical Models:** 2.2: Up and Down the Staircase; 2.3: Tree Top Fun; 2.5: Amusement Park or Movies **Growing, Growing, Growing:** 2.1: Killer Plant Strikes Lake Victoria; 2.3 Studying Snake Populations; 3.1: Reproducing Rabbits; 3.2: Investing for the Future **Say it With Symbols:** 4.3: Generating Patterns **Function Junctions:** 2.1: Arithmetic Sequences; 2.2: Geometric Sequences
A1.QE.3: Graph exponential and quadratic equations in two variables with and without technology.	**Thinking with Mathematical Models:** 1.1: Bridge Thickness and Strength; 1.3: Custom Construction Parts; 2.2: Up and Down the Staircase **Growing, Growing, Growing:** 1.3: Making a New Offer; 2.1: Killer Plant Strikes Lake Victoria; 2.3: Studying Snake Populations; 4.1: Making Smaller Ballots; 4.2: Fighting Fleas; 4.3: Cooling Water
AI.QE.4: Solve quadratic equations in one variable by inspection (e.g., for x^2 = 49), finding square roots, using the quadratic formula, and factoring, as appropriate to the initial form of the equation.	**It's in the System:** 3.3: Operating at a Profit **Function Junctions:** 4.1: Limiting Driving Miles; 4.2: What Makes a Car Green; 4.3: Feasible Points; 4.4: Miles of Emissions

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AI.QE.5: Represent real-world problems using quadratic equations in one or two variables and solve such problems with and without technology. Interpret the solution and determine whether it is reasonable.	**Function Junction:** 4.1: Applying Square Roots; 4.2: Completing the Square; 4.3: The Quadradic Formula; 4.4: Complex Numbers
AI.QE.6: Use the process of factoring to determine zeros, lines of symmetry, and extreme values in real-world and other mathematical problems involving quadratic functions; interpret the results in the real-world contexts.	**Frogs, Fleas, and Painted Cubes:** 2.4: Quadratic Functions and Their Graphs **Function Junctions:** 4.2: Completing the Square; 4.3: The Quadratic Formula
AI.QE.7: Describe the relationships among the solutions of a quadratic equation, the zeros of the function, the x-intercepts of the graph, and the factors of the expression.	**Frogs, Fleas, and Painted Cubes:** 2.4: Quadratic Functions and Their Graphs **Function Junctions:** 4.2: Completing the Square; 4.3: The Quadratic Formula **Growing, Growing, Growing:** 5.1: Looking for Patterns Among Exponents
DATA ANALYSIS AND STATISTICS	
AI.DS.1: Distinguish between random and non-random sampling methods, identify possible sources of bias in sampling, describe how such bias can be controlled and reduced, evaluate the characteristics of a good survey and well-designed experiment, design simple experiments or investigations to collect data to answer questions of interest, and make inferences from sample results.	This standard is outside the scope of Connected Mathematics Project 3 (CMP3), ©2017 Grade 8 Algebra 1.
AI.DS.2: Graph bivariate data on a scatter plot and describe the relationship between the variables.	**Thinking with Mathematical Models:** 2.1: Modeling Linear Data Patterns; 4.1: Vitruvian Man; 4.2: Older and Faster; 4.3: Correlation Coefficients and Outliers
AI.DS.3: Use technology to find a linear function that models a relationship for a bivariate data set to make predictions; interpret the slope and y intercept, and compute (using technology) and interpret the correlation coefficient.	**Thinking with Mathematical Models:** 2.1 Modeling Linear Data Patterns

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AI.DS.4: Distinguish between correlation and causation.	**Thinking with Mathematical Models:** 4.3: Correlation Coefficients and Outliers; 5.3: After-School Jobs and Homework
AI.DS.5: Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns (including joint, marginal, and conditional relative frequencies) to describe possible associations and trends in the data.	**Thinking with Mathematical Models:** 5.1: Wood or Steel; 5.2: Politics of Girls and Boys; 5.3: After-School Jobs and Homework
AI.DS.6: Understand that statistics and data are non-neutral and designed to serve a particular interest. Analyze the possibilities for whose interest might be served and how the representations might be misleading.	This standard is outside the scope of Connected Mathematics Project 3 (CMP3), ©2017 Grade 8 Algebra 1.