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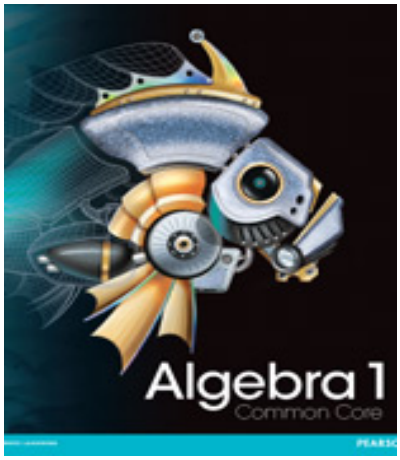

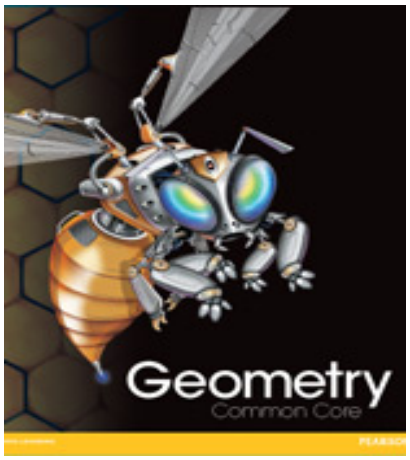

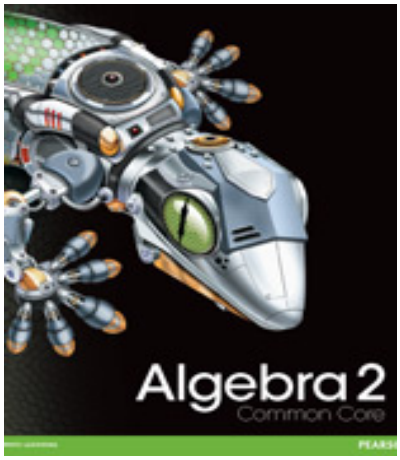

to the

Indiana Academic Standards for Mathematics (2014)

ALWAYS LEARNING PEARSON

A Correlation of Pearson High School Mathematics
Algebra 1, Geometry, and Algebra 2, Common Core Edition, ©2012
to the Indiana Academic Standards for Mathematics (2014)

Introduction

This document demonstrates how ***Pearson Mathematics: Algebra 1, Geometry, Algebra 2, Common Core Edition,* ©2012** fits the Indiana Academic Standards for Mathematics (2014), Algebra I, Geometry and Algebra II. Correlation references are to the pages of the Student and Teacher's Editions, Concept Bytes, and Learning Resources within the Teacher's Editions.

Pearson Mathematics: Algebra 1, Geometry, Algebra 2 Common Core Edition is not just "aligned" to the Common Core State Standards; it was written specifically for the Common Core State Standards. The program fully addresses the Common Core Content Standards and infuses the Standards for Mathematical Practice throughout every lesson.

Pearson Mathematics: Algebra 1, Geometry, Algebra 2 Common Core Edition incorporates a blend of print and digital components to tap into the power of mathematics and mathematical reasoning. The wealth and flexibility of resources will enable you to easily adapt to the changing needs of your classroom.

Program Features

- Offers unmatched development of problem solving throughout the entire program with the Solve It, Think-Write Boxes and Know-Need-Plan Boxes, Think About a Plan Worksheets, Performance Tasks, and other features unique to the program.

- Teachers can enrich instruction with interactive lesson content and video that makes real-world connections, and models thinking and reasoning using interactive tools at PowerAlgebra.com and PowerGeometry.com. Students can complete lessons independently and receive immediate feedback using the online content to support in-class instruction.

- Teachers are provided targeted support to ensure successful transition to a Common Core State Standards-based curriculum with resources such as a Common Core Overview and Implementation Guide. All teaching resources are available in one easy to access location in print and online.

This document demonstrates the high degree of success students will achieve by using ***Pearson Mathematics: Algebra 1, Geometry, and Algebra 2, Common Core Edition***.

A Correlation of Pearson High School Mathematics Algebra 1, Geometry, and Algebra 2, Common Core Edition, ©2012 to the Indiana Academic Standards for Mathematics (2014)

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Indiana Academic Standards for Mathematics (2014) Algebra I	Pearson High School Mathematics Algebra 1, Common Core Edition ©2012
PROCESS STANDARDS FOR MATHEMATICS	
PS.1: Make sense of problems and persevere in solving them.	**SE/TE:** Chapter 1: 4, 21; Chapter 3: 169, 171; Chapter 5: 294, 301; Chapter 7: 422, 430; Chapter 9: 551, 557; Chapter 11: 664, 682
PS.2: Reason abstractly and quantitatively.	**SE/TE:** Chapter 1: 23, 37 Chapter 3: 169, 176; Chapter 5: 299, 311; Chapter 7: 418, 430; Chapter 9: 551, 564; Chapter 11: 668, 670
PS.3: Construct viable arguments and critique the reasoning of others.	**SE/TE:** Chapter 1: 14, 43; Chapter 3: 169, 174; Chapter 5: 305, 313; Chapter 7: 422, 430; Chapter 9: 551, 557; Chapter 11: 668, 682
PS.4: Model with mathematics.	**SE/TE:** Chapter 1: 9, 30; Chapter 3: 164, 176; Chapter 5: 336, 341; Chapter 7: 460; Chapter 9: 546; Chapter 11: 714
PS.5: Use appropriate tools strategically.	**SE/TE:** Chapter 2: 120; Chapter 6: 370, 406; Chapter 9: 551, 567; Chapter 10: 645; Chapter 11: 705, 713; Chapter 12: 775
PS.6: Attend to precision.	**SE/TE:** Chapter 1: 10, 16; Chapter 3: 167, 194; Chapter 4: 268; Chapter 7: 448, 467; Chapter 9: 551; Chapter 11: 678
PS.7: Look for and make use of structure.	**SE/TE:** Chapter 1: 8, 27; Chapter 3: 183; Chapter 5: 305, 330; Chapter 7: 422, 430; Chapter 9: 557, 564; Chapter 11: 675, 677
PS.8: Look for and express regularity in repeated reasoning.	**SE/TE:** Chapter 1: 14, 56-57; Chapter 2: 114, 124; Chapter 7: 463; Chapter 8: 498, 504, 508; Chapter 9: 559, 583

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Indiana Academic Standards for Mathematics (2014) Algebra I	Pearson High School Mathematics Algebra 1, Common Core Edition ©2012
Mathematics Standards for 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.	**SE/TE:** Chapter 1: 16-22, 23-28 **TE:** Chapter 1: 22A-22B, 28A-28B
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.	**SE/TE:** Chapter 1: 30-36, 38-44, CB 45 **TE:** Chapter 1: 36A-36B, 44A-44B
AI.RNE.3: Rewrite and evaluate numeric expressions with positive rational exponents using the properties of exponents.	**SE/TE:** Chapter 1: 10-15; Chapter 7: 425-431, CB 432, 433-438, CB 447 **TE:** Chapter 1: 15A-15B; Chapter 7: 431A-431B, 438A-438B
AI.RNE.4: Simplify square roots of non-perfect square integers and algebraic monomials.	**SE/TE:** Chapter 1: 16-22, 38-44; Chapter 7: 439-445 **TE:** Chapter 1: 22A-22B, 44A-44B; Chapter 7: 445A-445B
AI.RNE.5: Simplify algebraic rational expressions, with numerators and denominators containing monomial bases with integer exponents, to equivalent forms.	**SE/TE:** Chapter 11: 664-669, 670-676, 684-689 **TE:** Chapter 11: 669A-669B, 676A-676B, 689A-689B
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.	**SE/TE:** Chapter 8: 492-496, 512-517, 518-522, 523-528, 529-533 **TE:** Chapter 8: 496A-496B, 517A-517B, 522A-522B, 528A-528B, 533A-533B
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.	**SE/TE:** Chapter 8: 486-491, 492-496, CB 497, 498-503, 504-509; Chapter 11: CB 677, 678-683 **TE:** Chapter 8: 491A-491B, 496A-496B, 503A-503B, 509A-509B; Chapter 11: 683A-383B

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Indiana Academic Standards for Mathematics (2014) Algebra I	Pearson High School Mathematics Algebra 1, Common Core Edition ©2012
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).	**SE/TE:** Chapter 4: 234-239, 240-245, 253-259, 268-273 **TE:** Chapter 4: 239A-239B, 245A-245B, 259A-259B, 273A-273B
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.	**SE/TE:** Chapter 4: 234-239, 240-245, 246-251, 253-259, 268-273 **TE:** Chapter 4: 239A-239B, 245A-245B, 251A-251B, 259A-259B, 273A-273B
AI.F.3: Identify the domain and range of relations represented in tables, graphs, verbal descriptions, and equations.	**SE/TE:** Chapter 4: 268-273; Chapter 7: 453-459; Chapter 9: 546-552; Chapter 10: 639-644 **TE:** Chapter 4: 273A-273B; Chapter 7: 459A-459B; Chapter 9: 552A-552B; Chapter 10: 644A-644B
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.	**SE/TE:** Chapter 4: 268-273 **TE:** Chapter 4: 273A-273B

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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.	**SE/TE:** Chapter 6: 364-369, 372-377, 378-384, 387-392, 394-399, 400-406 **TE:** Chapter 6: 369A-369B, 377A-377B, 384A-384B, 392A-392B, 399A-399B, 406A-406B
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.	**SE/TE:** Chapter 6: 364-369, 372-377, 378-384, 387-392, 394-399, 400-406 **TE:** Chapter 6: 369A-369B, 377A-377B, 384A-384B, 392A-392B, 399A-399B, 406A-406B
AI.L.3: Represent real-world and other mathematical problems using an algebraic proportion that leads to a linear equation and solve such problems.	**SE/TE:** Chapter 2: 124-129, 130-136; Chapter 11: 626-631, 691-697 **TE:** Chapter 2: 129A-129B, 136A-136B; Chapter 11: 631A-631B, 697A-697B
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).	**SE/TE:** Chapter 5: 294-300, 301-306, 308-314, 315-320; Chapter 6: 364-369 **TE:** Chapter 5: 300A-300B, 306A-306B, 314A-314B, 320A-320B; Chapter 6: 369A-369B
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.	**SE/TE:** Chapter 5: 294-300, 301-306, 308-314, 315-320, 322-328 **TE:** Chapter 5: 300A-300B, 306A-306B, 314A-314B, 320A-320B, 328A-328B

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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.	**SE/TE:** Chapter 5: 308-314, 315-320, 322-328 **TE:** Chapter 5: 314A-314B, 320A-320B, 328A-328B
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.	**SE/TE:** Chapter 5: 308-315, 315-320, 322-328, 330-335; Chapter 6: 364-370, 387-392, 394-399, 400-405 **TE:** Chapter 5: 314A-314B, 320A-320B, 328A-328B, 335A-335B; Chapter 6: 370A-370B, 392A-392B, 399A-399B, 405A-405B
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.	**SE/TE:** Chapter 3: 200-206 **TE:** Chapter 3: 206A-206B
AI.L.9: Solve absolute value linear equations in one variable.	**SE/TE:** Chapter 3: 207-213 **TE:** Chapter 3: 213A-213B
AI.L.10: Graph absolute value linear equations in two variables.	**SE/TE:** Chapter 3: 207-213; Chapter 5: 346-350, CB 351 **TE:** Chapter 3: 213A-213B; Chapter 5: 350A-350B
AI.L.11: Solve equations and formulas for a specified variable, including equations with coefficients represented by variables.	**SE/TE:** Chapter 2: 81-87, 88-93, 94-100, CB 101, 109-114 **TE:** Chapter 2: 87A-87B, 93A-93B, 100A-100B, 114A-114B

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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.	**SE/TE:** Chapter 6: 364-369, CB 370 **TE:** Chapter 6: 369A-369B
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.	**SE/TE:** Chapter 6: 372-377, 378-384 **TE:** Chapter 6: 377A-377B, 384A-384B
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.	**SE/TE:** Chapter 6: 364-369, 372-377, 378-384, 387-392 **TE:** Chapter 6: 369A-369B, 377A-377B, 384A-384B, 392A-392B
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.	**SE/TE:** Chapter 6: 394-399, 400-406 **TE:** Chapter 6: 399A-399B, 406A-406B

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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.	**SE/TE:** Chapter 7: 418-423, 425-431, 433-438, 439-445, 453-459, 460-466, 467-472 **TE:** Chapter 7: 423A-423B, 431A-431B, 438A-438B, 445A-445B, 459A-459B, 466A-466B, 472A-472B
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.	**SE/TE:** Chapter 7: 453-459, 460-466 **TE:** Chapter 7: 459A-459B, 466A-466B
A1.QE.3: Graph exponential and quadratic equations in two variables with and without technology.	**SE/TE:** Chapter 7: 453-459, 460-466, 467-472; Chapter 9: 553-558, 561-566, 582-588, 589-594, 596-600 **TE:** Chapter 7: 459A-459B, 466A-466B, 472A-472B; Chapter 9: 558A-558B, 566A-566B, 588A-588B, 594A-594B, 600A-600B
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.	**SE/TE:** Chapter 9: 561-566, CB 567, 568-572, 582-588 **TE:** Chapter 9: 566A-566B, 572A-572B, 588A-588B
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.	**SE/TE:** Chapter 9: 561-566, 568-572, CB 573, 576-581, 582-588, 589-594 **TE:** Chapter 9: 566A-566B, 572A-572B, 581A-581B, 588A-588B, 594A-594B

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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.	**SE/TE:** Chapter 9: 568-572, CB 573 **TE:** Chapter 9: 572A-572B
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.	**SE/TE:** Chapter 9: 546-552, 561-566, 589-594 **TE:** Chapter 9: 552A-552B, 566A-566B, 594A-594B
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.	**SE/TE:** Chapter 12: 738-743, CB 752, 753-759 **TE:** Chapter 12: 743A-743B, 759A-759B
AI.DS.2: Graph bivariate data on a scatter plot and describe the relationship between the variables.	**SE/TE:** Chapter 5: 336-343; Chapter 12: 732-737, 746-751 **TE:** Chapter 5: 343A-343B Chapter 12: 737A-737B, 751A-751B
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.	**SE/TE:** Chapter 1: CB 59; Chapter 4: CB 260-261; Chapter 5: CB 307, 336-343; Chapter 12: CB 775 **TE:** Chapter 5: 343A-343B
AI.DS.4: Distinguish between correlation and causation.	**SE/TE:** Chapter 5: 336-343 **TE:** Chapter 5: 343A-343B

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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.	**SE/TE:** Chapter 12: 732-737, CB 760 **TE:** Chapter 12: 737A-737B
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.	**SE/TE:** Chapter 12: CB 752, 753-759 **TE:** Chapter 12: 759A-759B

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Indiana Academic Standards for Mathematics (2014) Geometry	Pearson High School Mathematics Geometry, Common Core Edition ©2012
PROCESS STANDARDS FOR MATHEMATICS	
PS.1: Make sense of problems and persevere in solving them.	**SE/TE:** Chapter 1: 17, 32; Chapter 3: 145, 162; Chapter 5: 285, 297; Chapter 7: 437, 446; Chapter 9: 551, 554; Chapter 11: 693, 705; Chapter 13: 827, 834
PS.2: Reason abstractly and quantitatively.	**SE/TE:** Chapter 1: 20; Chapter 9: 597; Chapter 11: 688; Chapter 13: 828, 830, 833, 856
PS.3: Construct viable arguments and critique the reasoning of others.	**SE/TE:** Chapter 1: 9, 17; Chapter 3: 145, 156; Chapter 5: 289, 298; Chapter 7: 437, 446; Chapter 9: 551, 559; Chapter 11: 693, 705; Chapter 13: 827, 834
PS.4: Model with mathematics.	**SE/TE:** Chapter 1: 18, 66; Chapter 9: 582; Chapter 10: 633, 658, 672; Chapter 11: 693, 733; Chapter 12: 790, 809; Chapter 13: 848, 861, 862
PS.5: Use appropriate tools strategically.	**SE/TE:** Chapter 1: 42, 43; Chapter 3: 147, 182; Chapter 5: 284, 289; Chapter 7: 470; Chapter 9: 544, 553; Chapter 11: 693
PS.6: Attend to precision.	**SE/TE:** Chapter 1: 11, 23; Chapter 3: 140, 148; Chapter 7: 432, 440; Chapter 9: 570; Chapter 11: 699, 708; Chapter 13: 824, 836, 849
PS.7: Look for and make use of structure.	**SE/TE:** Chapter 1: 4, 46; Chapter 3: 160, 170; Chapter 5: 301, 309; Chapter 7: 437, 448; Chapter 9: 545, 568; Chapter 11: 693, 696
PS.8: Look for and express regularity in repeated reasoning.	**SE/TE:** Chapter 3: 179; Chapter 5: 292, 304; Chapter 8: 496; Chapter 10: 640, 647, 655, 664; Chapter 11: 705, 737

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Indiana Academic Standards for Mathematics (2014) Geometry	Pearson High School Mathematics Geometry, Common Core Edition ©2012
Mathematics Standards for Geometry	
LOGIC AND PROOFS	
G.LP.1: Understand and describe the structure of and relationships within an axiomatic system (undefined terms, definitions, axioms and postulates, methods of reasoning, and theorems). Understand the differences among supporting evidence, counterexamples, and actual proofs.	**SE/TE:** Chapter 1: 11-19; Chapter 2: 82-88, 106-112, 113-119, 120-127; Chapter 5: 317-322 **TE:** Chapter 1: 19A-19B; Chapter 2: 88A-88B, 112A-112B, 119A-119B, 127A-127B; Chapter 5: 322A-322B
G.LP.2: Know precise definitions for angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, and plane. Use standard geometric notation.	**SE/TE:** Chapter 1: 4-10, 11-19, 20-26, 27-33, 34-40, 43-48; Chapter 3: 140-146, CB 170, CB179-180; Chapter 10: 649-657 **TE:** Chapter 1: 10A-10B, 19A-19B, 26A-26B, 33A-33B, 40A-40B, 48A-48B; Chapter 3: 146A-146B; Chapter 10: 657A-657B
G.LP.3: State, use, and examine the validity of the converse, inverse, and contrapositive of conditional ("if – then") and bi-conditional ("if and only if") statements.	**SE/TE:** Chapter 2: 89-95, 98-104 **TE:** Chapter 2: 95A-95B, 104A-104B
G.LP.4: Develop geometric proofs, including direct proofs, indirect proofs, proofs by contradiction and proofs involving coordinate geometry, using two-column, paragraphs, and flow charts formats.	**SE/TE:** Chapter 2: 113-119, 156-163; Chapter 4: 258-264; Chapter 5: 317-322; Chapter 6: 406-412, 414-418; Chapter 12: 762-769 **TE:** Chapter 2: 119A-119B, 163A-163B; Chapter 4: 258A-264B; Chapter 5: 322A-322B; Chapter 6: 412A-412B, 418A-418B; Chapter 12: 769A-769B
POINTS, LINES, ANGLES, AND PLANES	
G.PL.1: Identify, justify, and apply properties of planes.	**SE/TE:** Chapter 1: 11-19 **TE:** Chapter 1: 19A-19B
G.PL.2: Describe the intersection of two or more geometric figures in the same plane.	**SE/TE:** Chapter 1: 11-19; Chapter 3: CB 170 **TE:** Chapter 1: 19A-19B

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Indiana Academic Standards for Mathematics (2014) Geometry	**Pearson High School Mathematics Geometry, Common Core Edition ©2012**
G.PL.3: Prove and apply theorems about lines and angles, including the following: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent, alternate exterior angles are congruent, and corresponding angles are congruent; when a transversal crosses parallel lines, same side interior angles are supplementary; and points on a perpendicular bisector of a line segment are exactly those equidistant from the endpoints of the segment.	**SE/TE:** Chapter 2: 82-88, 89-95, CB 96-97, 98-104, 106-112, 113-119, 120-127; Chapter 3: 140-146, 148-155, 156-163; Chapter 5: 292-299, CB 308 **TE:** Chapter 2: 88A-88B, 95A-95B, 104A-104B, 112A-112B, 119A-119B, 127A-127B; Chapter 3: 146A-146B, 155A-155B, 163A-163B; Chapter 5: 299A-299B
G.PL.4: Know that parallel lines have the same slope and perpendicular lines have opposite reciprocal slopes. Determine if a pair of lines are parallel, perpendicular, or neither by comparing the slopes in coordinate graphs and in equations. Find the equation of a line, passing through a given point, that is parallel or perpendicular to a given line.	**SE/TE:** Chapter 3: 189-196, 197-204; Chapter 7: 450-458, 460-467 **TE:** Chapter 3: 196A-196B, 204A-204B; Chapter 7: 458A-458B, 467A-467B
G.PL.5: Explain and justify the process used to construct, with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.), congruent segments and angles, angle bisectors, perpendicular bisectors, altitudes, medians, and parallel and perpendicular lines.	**SE/TE:** Chapter 1: CB 42, 43-48, CB 49; Chapter 3: 182-188; Chapter 4: 244-248, CB 249; Chapter 5: 285-291; Chapter 6: CB 413; Chapter 7: CB 470 **TE:** Chapter 1: 48A-48B; Chapter 3: 188A-188B; Chapter 4: 248A-248B; Chapter 5: 291A-291B

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Indiana Academic Standards for Mathematics (2014) Geometry	Pearson High School Mathematics Geometry, Common Core Edition ©2012
TRIANGLES	
G.T.1: Prove and apply theorems about triangles, including the following: measures of interior angles of a triangle sum to 180°; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point; a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem, using triangle similarity; and the isosceles triangle theorem and its converse.	**SE/TE:** Chapter 2: 82-88, 89-95, CB 96, 98-104, 106-112, 113-119; Chapter 3: 171-178; Chapter 4: 250-256; Chapter 5: CB 284, 285-291, 309-315, 317-322, 324-331, 332-339; Chapter 7: 471-478; Chapter 8: CB 490, 491-498 **TE:** Chapter 2: 88A-88B, 95A-95B, 104A-104B, 112A-112B, 119A-119B; Chapter 3: 178A-178B; Chapter 4: 256A-256B; Chapter 5: 291A-291B, 315A-315B, 322A-322B, 331A-331B, 339A-339B; Chapter 7: 478A-478B; Chapter 8: 498A-498B
G.T.2: Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.	**SE/TE:** Chapter 4: 226-233, 224-241, CB 242; Chapter 9: 578-585 **TE:** Chapter 4: 233A-233B, 241A-241B; Chapter 9: 585A-585B
G.T.3: Explain and justify the process used to construct congruent triangles with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.).	**SE/TE:** Chapter 4: CB 225, 226-233, 234-241 **TE:** Chapter 4: 233A-233B, 241A-241B
G.T.4: Given two triangles, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides, and to establish the AA criterion for two triangles to be similar.	**SE/TE:** Chapter 9: 587-593, 594-600 **TE:** Chapter 9: 593A-593B, 600A-600B
G.T.5: Use properties of congruent and similar triangles to solve real-world and mathematical problems involving sides, perimeters, and areas of triangles.	**SE/TE:** Chapter 4: 218-224, 226-233, 234-241, 244-248, 250-256, 258-264 **TE:** Chapter 4: 224A-224B, 233A-233B, 241A-241B, 248A-248B, 256A-256B, 2 64A-264B

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G.T.6: Prove and apply the inequality theorems, including the following: triangle inequality, inequality in one triangle, and the hinge theorem and its converse.	**SE/TE:** Chapter 5: 324-331, 332-339 **TE:** Chapter 5: 331A-331B, 339A-339B
G.T.7: State and apply the relationships that exist when the altitude is drawn to the hypotenuse of a right triangle. Understand and use the geometric mean to solve for missing parts of triangles.	**SE/TE:** Chapter 5: CB 308, 309-315; Chapter 7: 460-467 **TE:** Chapter 5: 315A-315B; Chapter 7: 467A-467B
G.T.8: Develop the distance formula using the Pythagorean Theorem. Find the lengths and midpoints of line segments in one- or two-dimensional coordinate systems. Find measures of the sides of polygons in the coordinate plane; apply this technique to compute the perimeters and areas of polygons in real-world and mathematical problems.	**SE/TE:** Chapter 1: 50-56; Chapter 6: 400-405; Chapter 8: 491-498 **TE:** Chapter 1: 56A-56B; Chapter 6: 405A-405B; Chapter 8:498A-498B
G.T.9: Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.	**SE/TE:** Chapter 4: 226-233, 234-241, CB 242; Chapter 8: CB 506 **TE:** Chapter 4: 233A-233B, 241A-241B
G.T.10: Use trigonometric ratios (sine, cosine and tangent) and the Pythagorean Theorem to solve real-world and mathematical problems involving right triangles.	**SE/TE:** Chapter 8: 491-498, 499-505, 507-513, CB 515, 516-521 **TE:** Chapter 8: 498A-498B, 505A-505B, 513A-513B, 521A-521B
G.T.11: Use special right triangles (30° - 60° and 45° - 45°) to solve real-world and mathematical problems.	**SE/TE:** Chapter 8: 499-505, 507-513 **TE:** Chapter 8: 505A-505B, 513A-513B

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QUADRILATERALS AND OTHER POLYGONS	
G.QP.1: Prove and apply theorems about parallelograms, including the following: opposite sides are congruent; opposite angles are congruent; the diagonals of a parallelogram bisect each other; and rectangles are parallelograms with congruent diagonals.	**SE/TE:** Chapter 2: 82-88, 89-95, CB 96-97, 98-104, 106-112, 113-119; Chapter 6: 359-366, 367-374, 375-382, 383-388 **TE:** Chapter 2: 88A-88B, 95A-95B, 104A-101B, 112A-112B, 119A-119B; Chapter 6: 366A-366B, 374A-374B, 382A-382B, 388A-388B
G.QP.2: Prove that given quadrilaterals are parallelograms, rhombuses, rectangles, squares or trapezoids. Include coordinate proofs of quadrilaterals in the coordinate plane.	**SE/TE:** Chapter 6: 359-366, 367-374, 375-382, 383-388, 414-418 **TE:** Chapter 6: 366A-366B, 374A-374B, 382A-382B, 388A-388B, 418A-418B
G.QP.3: Find measures of interior and exterior angles of polygons. Explain and justify the method used.	**SE/TE:** Chapter 3: 171-178; Chapter 6: 353-358 **TE:** Chapter 3: 178A-178B; Chapter 6: 358A-358B
G.QP.4: Identify types of symmetry of polygons, including line, point, rotational, and self-congruencies.	**SE/TE:** Chapter 9: CB 568-569
G.QP.5: Deduce formulas relating lengths and sides, perimeters, and areas of regular polygons. Understand how limiting cases of such formulas lead to expressions for the circumference and the area of a circle.	**SE/TE:** Chapter 1: 59-67 **TE:** Chapter 1: 67A-67B
CIRCLES	
G.CI.1: Define, identify and use relationships among the following: radius, diameter, arc, measure of an arc, chord, secant, tangent, and congruent concentric circles.	**SE/TE:** Chapter 10: 649-657; Chapter 12: 771-779, CB 789, 780-787, 790-797, CB 770 **TE:** Chapter 10: 657A-657B; Chapter 12: 779A-779B, 787A-787B, 797A-797B

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G.CI.2: Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius; derive the formula for the area of a sector.	**SE/TE:** Chapter 10: 648-657, 660-666 **TE:** Chapter 10: 657A-657B, 666A-666B
G.CI.3: Identify and describe relationships among inscribed angles, radii, and chords, including the following: the relationship that exists between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; and the radius of a circle is perpendicular to a tangent where the radius intersects the circle.	**SE/TE:** Chapter 10: 648-657, CB 658; Chapter 12: 762-769, CB 770, 771-779, 780-787, CB 789, 790-797 **TE:** Chapter 10: 657A-657B; Chapter 12: 769A-769B, 779A-779B, 787A-787B, 797A-797B
G.CI.4: Solve real-world and other mathematical problems that involve finding measures of circumference, areas of circles and sectors, and arc lengths and related angles (central, inscribed, and intersections of secants and tangents).	**SE/TE:** Chapter 10: 649-657, CB 659, 660-666; Chapter 12: 762-769, 771-779, 780-787, CB 789, 790-797 **TE:** Chapter 10: 657A-657B, 666A-666B; Chapter 12: 769A-769B, 779A-779B, 787A-787B, 797A-797B
G.CI.5: Construct a circle that passes through three given points not on a line and justify the process used.	**SE/TE:** Related Content: Chapter 12: 798-803, 806-811 **TE:** Related Content: Chapter 12: 803A-803B, 811A-811B
G.CI.6: Construct a tangent line to a circle through a point on the circle, and construct a tangent line from a point outside a given circle to the circle; justify the process used for each construction.	**SE/TE:** Chapter 12: 780-787 **TE:** Chapter 12: 787A-787B
G.CI.7: Construct the inscribed and circumscribed circles of a triangle with or without technology, and prove properties of angles for a quadrilateral inscribed in a circle.	**SE/TE:** Chapter 5: CB 300, 301-307; Chapter 12: 780-787 **TE:** Chapter 5: 307A-307B; Chapter 12: 787A-787B

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TRANSFORMATIONS	
G.TR.1: Use geometric descriptions of rigid motions to transform figures and to predict and describe the results of translations, reflections and rotations on a given figure. Describe a motion or series of motions that will show two shapes are congruent.	**SE/TE:** Chapter 9: 545-552, 554-560, 561-567, 570-576, 578-585 **TE:** Chapter 9: 552A-552B, 560A-560B, 567A-567B, 576A-576B, 585A-585B
G.TR.2: Understand a dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged. Verify experimentally the properties of dilations given by a center and a scale factor. Understand the dilation of a line segment is longer or shorter in the ratio given by the scale factor.	**SE/TE:** Chapter 9: CB 586, 587-593 **TE:** Chapter 9: 593A-593B
THREE-DIMENSIONAL SOLIDS	
G.TS.1: Describe relationships between the faces, edges, and vertices of three-dimensional solids. Create a net for a given three-dimensional solid. Describe the three-dimensional solid that can be made from a given net (or pattern).	**SE/TE:** Chapter 1: 4-10; Chapter 11: 688-695, CB 696-697, 699-707, 708-715, 726-732 **TE:** Chapter 1: 10A-10B; Chapter 11: 695A-695B, 707A-707B, 715A-715B, 732A-732B
G.TS.2: Describe symmetries of three-dimensional solids.	For related content, please see: **SE/TE:** Chapter 11: 733-740, 717-724 **TE:** Chapter 11: 740A-740B, 724A-724B
G.TS.3: Know properties of congruent and similar solids, including prisms, regular pyramids, cylinders, cones, and spheres; solve problems involving congruent and similar solids.	**SE/TE:** Chapter 11: CB 741, 742-749 **TE:** Chapter 11: 749A-749B
G.TS.4: Describe sets of points on spheres, including chords, tangents, and great circles.	For related content, please see: **SE/TE:** Chapter 11: 733-740 **TE:** Chapter 11: 740A-740B

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G.TS.5: Solve real-world and other mathematical problems involving volume and surface area of prisms, cylinders, cones, spheres, and pyramids, including problems that involve algebraic expressions.	**SE/TE:** Chapter 10: CB 614-615, 635-641; Chapter 11: 717-724, 726-732, 733-740 **TE:** Chapter 10: 641A-641B; Chapter 11: 724A-724B, 732A-732B, 740A-740B
G.TS.6: Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).	**SE/TE:** Chapter 3: 164-169 **TE:** Chapter 3: 169A-169B
G.TS.7: Graph points on a three-dimensional coordinate plane. Explain how the coordinates relate the point as the distance from the origin on each of the three axes.	**SE/TE:** Related Content: Chapter 1: 4-10, 11-19, 50-56; Chapter 6: 406-412 **TE:** Related Content: Chapter 1: 10A-10B, 19A-19B, 56A-56B; Chapter 6: 412A-412B
G.TS.8: Determine the distance of a point to the origin on the three-dimensional coordinate plane using the distance formula.	**SE/TE:** Related Content: Chapter 1: 50-56 **TE:** Related Content: Chapter 1: 56A-56B
G.TS.9: Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.	**SE/TE:** Chapter 11: 688-695, CB 696-697; Chapter 12: 806-811 **TE:** Chapter 11: 695A-695B; Chapter 12: 811A-811B

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PROCESS STANDARDS FOR MATHEMATICS	
PS.1: Make sense of problems and persevere in solving them.	**SE / TE:** Chapter 1: 9, 16; Chapter 3: 139, 147; Chapter 5: 286, 294; Chapter 7: 440, 448; Chapter 9: 570, 575; Chapter 11: 679, 686; Chapter 13: 833, 841
PS.2: Reason abstractly and quantitatively.	**SE / TE:** Chapter 1: 8, 18; Chapter 3: 140, 142; Chapter 5: 286, 294; Chapter 7: 440, 447; Chapter 9: 576, 585; Chapter 11: 692, 701; Chapter 13: 833, 841
PS.3: Construct viable arguments and critique the reasoning of others.	**SE / TE:** Chapter 1: 9, 16; Chapter 3: 140, 147; Chapter 5: 287, 301; Chapter 7: 440, 448; Chapter 9: 570, 576; Chapter 11: 679, 686; Chapter 13: 833, 842
PS.4: Model with mathematics.	**SE / TE:** Chapter 1: 30; Chapter 3: 140, 164; Chapter 7: 434, 449; Chapter 9: 576; Chapter 11: 701, 703; Chapter 12: 780
PS.5: Use appropriate tools strategically.	**SE / TE:** Chapter 3: 134, 138, 163, 180; Chapter 5: 280, 288; Chapter 7: 440, 449; Chapter 9: 576, 600; Chapter 11: 685, 722; Chapter 13: 841, 857
PS.6: Attend to precision.	**SE / TE:** Chapter 1: 15, 30; Chapter 5: 296, 303; Chapter 9: 572, 580; Chapter 11: 674, 681, 688, 696; Chapter 13: 828, 844
PS.7: Look for and make use of structure.	**SE / TE:** Chapter 1: 4, 39; Chapter 3: 149; Chapter 5: 310, 318; Chapter 7: 442, 474; Chapter 9: 564, 578; Chapter 13: 875
PS.8: Look for and express regularity in repeated reasoning.	**SE / TE:** Chapter 5: 312, 326; Chapter 11: 719; Chapter 12: 764, 772; Chapter 13: 835; Chapter 14: 943, 951

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Mathematics Standards for Algebra II	
COMPLEX NUMBERS AND EXPRESSIONS	
AII.CNE.1: Know there is an imaginary number, i, such that i^2 = -1, and every complex number can be written in the form a + bi, with a and b real. Use the relation i^2 = –1 and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.	**SE/TE:** Chapter 4: 248-255 **TE:** Chapter 4: 255A-255B
AII.CNE.2: Translate expressions between radical and exponent form and simplify them using the laws of exponents.	**SE/TE:** Chapter 6: 361-366, 367-373, 374-380, 381-388 **TE:** Chapter 6: 336A-336B, 373A-373B, 380A-380B, 388A-388B
AII.CNE.3: Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide algebraic rational expressions.	**SE/TE:** Chapter 8: 527-533, 534-541, 542-548, CB 549 **TE:** Chapter 8: 533A-533B, 541A-541B, 548A-548B
AII.CNE.4: Rewrite algebraic rational expressions in equivalent forms (e.g., using laws of exponents and factoring techniques).	**SE/TE:** Chapter 8: 527-533, 534-541, 542-548, CB 549, CB 550 **TE:** Chapter 8: 533A-533B, 541A-541B, 548A-548B
AII.CNE.5: Rewrite rational expressions in different forms; write a(x)/b(x) in the form q(x) + r(x)/b(x), where a(x), b(x), q(x), and r(x) are polynomials with the degree of r(x) less than the degree of b(x), using long division and synthetic division.	**SE/TE:** Chapter 5: 303-310; Chapter 8: 542-548 **TE:** Chapter 5: 310A-310B; Chapter 8: 548A-548B
AII.CNE.6: Find partial sums of arithmetic and geometric series and represent them using sigma notation.	**SE/TE:** Chapter 9: 580-586, 587-593, CB 594, 595-601 **TE:** Chapter 9: 586A-586B, 593A-593B, 601A-601B

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FUNCTIONS	
AII.F.1: Determine whether a relation represented by a table, graph, or equation is a function.	**SE/TE:** Chapter 2: 60-67, 68-73; Chapter 6: 405-412, CB 413, 414-420 **TE:** Chapter 2: 67A-67B, 73A-73B; Chapter 6: 412A-412B, 420A-420B
AII.F.2: Understand composition of functions and combine functions by composition.	**SE/TE:** Chapter 6: 398-404, 405-412 **TE:** Chapter 6: 404A-404B, 412A-412B
AII.F.3: Understand that an inverse function can be obtained by expressing the dependent variable of one function as the independent variable of another, as f and g are inverse functions if and only if $f(x)=y$ and $g(y)=x$, for all values of x in the domain of f and all values of y in the domain of g. Find the inverse of a function that has an inverse.	**SE/TE:** Chapter 6: 405-412, CB 413 **TE:** Chapter 6: 412A-412B
AII.F.4: Understand that if the graph of a function contains a point (a, b), then the graph of the inverse relation of the function contains the point (b, a); the inverse is a reflection over the line $y = x$.	**SE/TE:** Chapter 6: 405-412, CB 413 **TE:** Chapter 6: 412A-412B
AII.F.5: Describe the effect on the graph of f(x) by replacing f(x) with $f(x) + k$, $k\,f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative) with and without technology. Find the value of k given the graph of f(x) and the graph of $f(x) + k$, $k\,f(x)$, $f(kx)$, or $f(x + k)$.	**SE/TE:** Chapter 2: 99-106, 107-113; Chapter 4: 194-201; Chapter 5: 339-345; Chapter 8: 507-514 **TE:** Chapter 2: 106A-106B, 113A-113B; Chapter 4: 201A-201B; Chapter 5: 345A-345B; Chapter 8: 514A-514B

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SYSTEMS OF EQUATIONS	
AII.SE.1: Solve a system of equations consisting of a linear equation and a quadratic equation in two variables algebraically and graphically with and without technology (e.g., find the points of intersection between the line y = –3x and the circle x^2 + y^2 = 3).	**SE/TE:** Chapter 4: CB 256, 258-264 **TE:** Chapter 4: 264A-264B
AII.SE.2: Solve systems of two or three linear equations in two or three variables algebraically and using technology.	**SE/TE:** Chapter 3: 134-141, 142-148, 149-155, CB 163, 166-173 **TE:** Chapter 3: 141A-141B, 148A-148B, 155A-155B, 173A-173B
AII.SE.3: Represent real-world problems using a system of linear equations in three variables and solve such problems with and without technology. Interpret the solution and determine whether it is reasonable.	**SE/TE:** Chapter 3: 134-141, 142-148, 149-155, 166-173 **TE:** Chapter 3: 141A-141B, 148A-148B, 155A-155B, 173A-173B
QUADRATIC EQUATIONS AND FUNCTIONS	
AII.Q.1: Represent real-world problems that can be modeled with quadratic functions using tables, graphs, and equations; translate fluently among these representations. Solve such problems with and without technology. Interpret the solutions and determine whether they are reasonable.	**SE/TE:** Chapter 4: 194-201, 202-208, 209-214 **TE:** Chapter 4: 201A-201B, 208A-208B, 209A-214B
AII.Q.2: Use completing the square to rewrite quadratic functions into the form y = a(x + h)^2 + k, and graph these functions with and without technology. Identify intercepts, zeroes, domain and range, and lines of symmetry. Understand the relationship between completing the square and the quadratic formula.	**SE/TE:** Chapter 4: 233-239, 240-247 **TE:** Chapter 4: 239A-239B, 247A-247B

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AII.Q.3: Use the discriminant to determine the number and type of solutions of a quadratic equation in one variable with real coefficients; find all solutions and write complex solutions in the form of a ± bi for real numbers a and b.	**SE/TE:** Chapter 4: 240-247 **TE:** Chapter 4: 247A-247B
EXPONENTIAL AND LOGARITHMIC EQUATIONS AND FUNCTIONS	
AII.EL.1: Write arithmetic and geometric sequences both recursively and with an explicit formula; use them to model situations and translate between the two forms.	**SE/TE:** Chapter 9: 572-577, 580-586, 587-593, CB 594, 595-601 **TE:** Chapter 9: 577A-577B, 586A-586B, 593A-593B, 601A-601B
AII.EL.2: Graph exponential functions with and without technology. Identify and describe features, such as intercepts, zeroes, domain and range, and asymptotic and end behavior.	**SE/TE:** Chapter 7: 434-441, 442-450 **TE:** Chapter 7: 441A-441B, 450A-450B
AII.EL.3: Identify the percent rate of change in exponential functions written as equations, such as y = (1.02)^t, y = (0.97)^t, y = (1.01)12^t, y = (1.2)^t/10, and classify them as representing exponential growth or decay.	**SE/TE:** Chapter 7: 434-441 **TE:** Chapter 7: 441A-441B
AII.EL.4: Use the properties of exponents to transform expressions for exponential functions (e.g., the expression 1.15^t can be rewritten as (1.15^1/12)^12t ≈ 1.012^12t to reveal the approximate equivalent monthly interest rate if the annual rate is 15%).	**SE/TE:** Chapter 7: 434-441, 442-450, 451-458, 462-468, 469-476, CB 484-485 **TE:** Chapter 7: 441A-441B, 450A-450B, 458A-458B, 468A-468B, 476A-476B
AII.EL.5: Know that the inverse of an exponential function is a logarithmic function. Represent exponential and logarithmic functions using graphing technology and describe their inverse relationship.	**SE/TE:** Chapter 7: 451-458, 462-468, 469-476 **TE:** Chapter 7: 458A-458B, 468A-468B, 476A-476B

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AII.EL.6: Use the laws of exponents to derive the laws of logarithms. Use the laws of logarithms and the inverse relationship between exponential functions and logarithms to evaluate expressions and solve equations in one variable.	**SE/TE:** Chapter 6: CB 360; Chapter 7: 451-458, 462-468, 469-476 **TE:** Chapter 7: 458A-458B, 468A-468B, 476A-476B
AII.EL.7: Represent real-world problems using exponential equations in one or two variables and solve such problems with and without technology. Interpret the solutions and determine whether they are reasonable.	**SE/TE:** Chapter 7: 434-441, 442-450, 469-476 **TE:** Chapter 7: 441A-441B, 450A-450B, 476A-476B
POLYNOMIAL, RATIONAL, AND OTHER EQUATIONS AND FUNCTIONS	
AII.PR.1: Solve real-world and other mathematical problems involving polynomial equations with and without technology. Interpret the solutions and determine whether the solutions are reasonable.	**SE/TE:** Chapter 5: 280-287, 288-295, 296-302, 303-310, 312-317 **TE:** Chapter 5: 287A-287B, 295A-295B, 302A-302B, 310A-310B, 317A-317B
AII.PR.2: Graph relations and functions including polynomial, square root, and piecewise-defined functions (including step functions and absolute value functions) with and without technology. Identify and describe features, such as intercepts, zeros, domain and range, end behavior, and lines of symmetry.	**SE/TE:** Chapter 2: CB 90-91, 107-113; Chapter 5: 280-287, 289-295; Chapter 6: 414-420 **TE:** Chapter 2: 113A-113B; Chapter 5: 287A-287B, 295A-295B; Chapter 6: 420A-420B
AII.PR.3: Solve real-world and other mathematical problems involving rational and radical functions, including direct, inverse, and joint variation. Give examples showing how extraneous solutions may arise.	**SE/TE:** Chapter 1: 41-48; Chapter 2: 68-73; Chapter 6: 390-397, 405-412, 414-420; Chapter 8: 498-505 **TE:** Chapter 1: 48A-48B; Chapter 2: 73A-73B; Chapter 6: 397A-397B, 412A-412B, 420A-420B; Chapter 8: 505A-505B

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DATA ANALYSIS, STATISTICS, AND PROBABILITY	
AII.DSP.1: Make inferences and justify conclusions from sample surveys, experiments, and observational studies. Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.	**SE/TE:** Chapter 11: 725-730 **TE:** Chapter 11: 730A-730B
AII.DSP.2: Use technology to find a linear, quadratic, or exponential function that models a relationship for a bivariate data set to make predictions; compute (using technology) and interpret the correlation coefficient.	**SE/TE:** Chapter 2: 92-98; Chapter 5: 331-338 **TE:** Chapter 2: 98A-98B; Chapter 5: 338A-338B
AII.DSP.3: Organize, graph (e.g., line plots and box plots), and compare univariate data of two or more different data sets using measures of center (mean and median) and spread (range, inter-quartile range, standard deviation, percentiles, and variance). Understand the effects of outliers on the statistical summary of the data.	**SE/TE:** Chapter 11: 711-719, 739-745 **TE:** Chapter 11: 719A-719B, 745A-745B
AII.DSP.4: Record multiple observations (or simulated samples) of random events and construct empirical models of the probability distributions. Construct a theoretical model and apply the law of large numbers to show the relationship between the two models.	**SE/TE:** Chapter 11: 681-687, 688-693, CB 694, 703-709 **TE:** Chapter 11: 687A-687B, 693A-693B, 709A-709B
AII.DSP.5: Understand dependent and independent events, and conditional probability; apply these concepts to calculate probabilities.	**SE/TE:** Chapter 11: 688-693, 696-702 **TE:** Chapter 11: 693A-693B, 702A-702B
AII.DSP.6: Understand the multiplication counting principle, permutations, and combinations; apply these concepts to calculate probabilities.	**SE/TE:** Chapter 11: 674-680 **TE:** Chapter 11: 680A-680B

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