

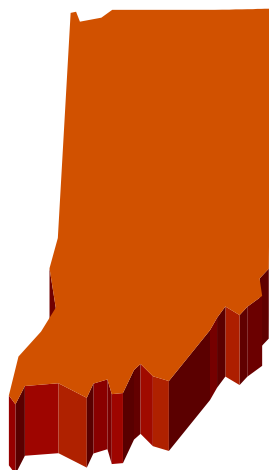
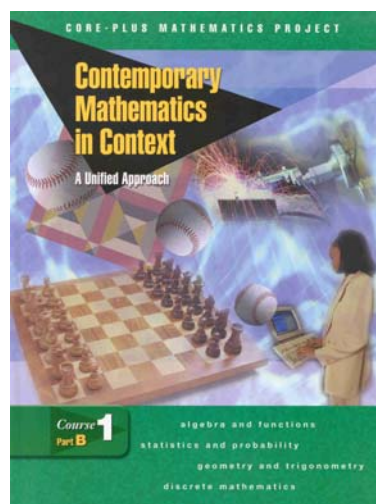
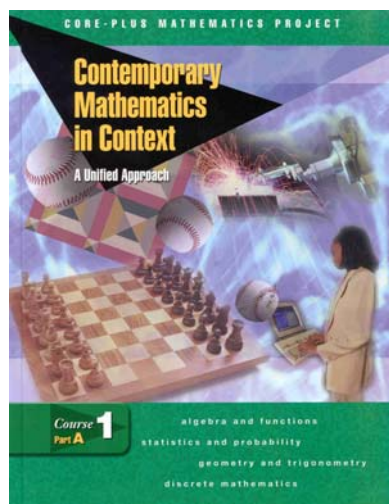
# Glencoe/McGraw-Hill

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alignment to

**Indiana  
Academic Math Standards  
Integrated Mathematics I**

This correlation of Glencoe/McGraw-Hill Contemporary Mathematics in Context contains page references to both Volume A and Volume B.

Course 1, Volume A: Pages 1-324

Course 1, Volume B: Pages 325-54

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ACADEMIC MATH STANDARDS FOR INTEGRATED MATHEMATICS I**

<b>OBJECTIVES</b>	<b>PAGE REFERENCES</b>
<b>Standard 1: Number Sense and Computation</b>	
IM1.1.1 Compare real number expressions.	SE: 1-97, 477-481 TWE: T1-T97, T477-T481
IM1.1.2 Simplify square roots using factors.	SE: 72 TWE: T72
IM1.1.3 Understand and use the distributive, associative, and commutative properties.	SE: 233-242 TWE: T233-T242
IM1.1.4 Use the laws of exponents for rational exponents.	SE: 477-481 TWE: 477-481
IM1.1.5 Use dimensional (unit) analysis to organize conversions and computations.	SE: 83, 176, 180, 194, 424 TWE: T83, T176, T180, T194, T424
<b>Standard 2: Algebra and Functions</b>	
IM1.2.1 Solve linear equations.	SE: 142, 211-226 TWE: T142, T211-T226
IM1.2.2 Solve equations and formulas for a specific variable.	SE: 97-226 TWE: T97-T226
IM1.2.3 Find solution sets of linear inequalities when possible numbers are given for the variable.	SE: 211-242 TWE: T211-T242
IM1.2.4 Solve linear inequalities using properties of order.	SE: 211-233 TWE: T211-T233

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<b>OBJECTIVES</b>	<b>PAGE REFERENCES</b>
IM1.2.5 Solve word problems that involve linear equations, formulas, and inequalities.	SE: 98-249 TWE: T98-T249
IM1.2.6 Sketch a reasonable graph for a given relationship.	SE: 144-147 TWE: T144-T147
IM1.2.7 Interpret a graph representing a given situation.	SE: 87-88, 103-110, 138, 141, 420, 480 TWE: T87-T88, T103-T110, T138, T141, T420, T480
IM1.2.8 Understand the concept of a function, decide if a given relation is a function and link equations to functions.	SE: 98-156, 157-248, 419-481 TWE: T98-T156, T157-T248, T419-T481
IM1.2.9 Find the domain and range of a relation.	SE: 98-156, 419-481 TWE: T98-T156, T419-T481
IM1.2.10 Graph a linear equation.	SE: 139, 140, 158-210, 434 TWE: T139, T140, T158-T210, T434
IM1.2.11 Find the slope, x-intercept and y-intercept of a line given its graph, its equation, or two points on the line.	SE: 158-210, 434, 467 TWE: T158-T210, T434, T467
IM1.2.12 Write the equation of a line in slope-intercept form. Understand how the slope and y-intercept are related to the equation.	SE: 181-210, 216, 369 TWE: T181-T210, T216, T369

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<b>OBJECTIVES</b>	<b>PAGE REFERENCES</b>
IM1.2.13 Write the equation of a line given appropriate information.	SE: 181-210, 369 TWE: T181-T210, T369
IM1.2.14 Write the equation of a line that models a given situation and use (or the graph of the line) to make predictions. Describe the slope of the line in terms of the given situation, recognizing that the slope is the rate of change.	SE: 181-210, 216, 369 TWE: T181-T210, T216, T369
IM1.2.15 Use the graph to estimate the solution of a pair of linear equations in two variables.	SE: 210-219, 226–233 TWE: T210-T219, T226–T233
IM1.2.16 Understand and use the substitution method to solve a pair of linear equations in two variables.	SE: 210-219, 226–233 TWE: T210-T219, T226–T233
IM1.2.17 Understand and use the addition or subtraction method to solve a pair of linear equations in two variables.	SE: 210-219, 226–233 TWE: T210-T219, T226–T233
IM1.2.18 Understand and use multiplication with the addition or subtraction method to solve a pair of linear equations in two variables.	SE: 210-219, 226–233 TWE: T210-T219, T226–T233
IM1.2.19 Use pairs of linear equations to solve word problems.	SE: 226–228, 229–232 TWE: T226–T228, T229–T232
IM1.2.20 Add and subtract polynomials.	SE: 236-237 TWE: T236-T237

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<b>OBJECTIVES</b>	<b>PAGE REFERENCES</b>
IM1.2.21 Multiple and divide monomials.	SE: 236–237  TWE: T236–T237
IM1.2.22 Find powers and roots of monomials (only when the answer has an integer exponent).	This objective falls within the content coverage for Course 2 SE: 300-310  TWE: T300-T310.
IM1.2.23 Multiply polynomials.	This objective falls within the content coverage for Course 2 SE: 208-224  TWE: T208-T224
IM1.2.24 Divide polynomials by monomials.	This objective falls within the content coverage for Course 3 SE: 215-224  TWE: T215-T224
IM1.2.25 Understand and describe the relationships among the solutions of an equation, the zeros of a function, the x-intercepts of a graph, and the factors of a polynomial expression.	SE: 101, 127, 130  TWE: T101, T127, T130
IM1.2.26 Graph quadratic, cubic, and radical equations.	This objective falls within the content coverage for Course 2 SE: 265-318  TWE: T265-T318

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<b>OBJECTIVES</b>	<b>PAGE REFERENCES</b>
IM1.2.27 Solve quadratic equations by using the quadratic formula.	This objective falls within the content coverage for Course 3 SE: 230-239  TWE: T230-T239
IM1.2.28 Use quadratic equations to solve word problems.	This objective falls within the content coverage for Course 2 SE: 265-288  TWE: T265-T288
IM1.2.29 Use graphing technology to find approximate solutions of quadratic and cubic equations.	SE: 143, 148-150, 153  TWE: T143, T148-T150, T153
IM1.2.30 Graph exponential functions.	SE: 420–431, 432–439, 439–447, 448–454, 455–467, 468–476, 477–483  TWE: T420–T431, T432–T439, T439–T447, T448–T454, T455–T467, T468–T476, T477–T483
IM1.2.31 Solve word problems involving applications of exponential functions to growth and decay.	SE: 420–438, 439-447, 448–454, 455–467, 468–476, 477–483  TWE: T420–T438, T439-T447, T448–T454, T455–T467, T468–T476, T477–T483
<b>Standard 3: Geometry and Measurement</b>	
IM1.3.1 Identify and describe convex, concave, and regular polygons.	SE: 383–385, 387-389  TWE: T383–T385, T387-T389

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<b>OBJECTIVES</b>	<b>PAGE REFERENCES</b>
IM1.3.2 Apply transformations (slides, flips, and turns) to polygons in order to decide congruence, similarity, symmetry, and tessellations. Know that images formed by translations are congruent to the original image.	SE: 389-415 TWE: T389-T415
IM1.3.3 Find and use measures of sides, perimeter, and areas of polygons, and relate these measures to each other using formulas.	SE: 107, 135, 355-382 TWE: T107, T135, T355-T382
IM1.3.4 Use properties of congruent and similar quadrilaterals to solve problems involving lengths and areas.	SE: 373-382 TWE: T373-T382
IM1.3.5 Find and use measures of sides, perimeters, and areas of quadrilaterals, and relate these measures to each other using formulas.	SE: 240, 355-382 TWE: T240, T355-T382
IM1.3.6 Prove and use the Pythagorean Theorem.	SE: 362–366, 368, 371, 374 TWE: T362–T366, T368, T371, 374
IM1.3.7 Describe relationships between the faces, edges, and vertices of polyhedra.	SE: 290, 349 TWE: T290, 349
IM1.3.8 Describe symmetries of geometric solids.	SE: 331, 340 TWE: T331, T340
<b>Standard 4: Data Analysis and Statistics</b>	

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<b>OBJECTIVES</b>	<b>PAGE REFERENCES</b>
IM1.4.1 Construct a line plot.	SE: 16–17, 19, 93 TWE: T16–T17, T19, T93
IM1.4.2 Find measures of central tendency for a set of data.	SE: 31- 46, 71-73, 96, 106 TWE: T31- T46, T71-T73, T96, T106
IM1.4.3 Find skewness and symmetry from a graph of data.	SE: 14-23 TWE: T14-T23
IM1.4.4 Construct a histogram using a graphing calculator.	SE: 19–46 TWE: T19–T46
IM1.4.5 Identify clusters, gaps, and outliers for a set of data.	SE: 16-19, 36, 51, 94-96 TWE: T16-T19, T36, T51, T94-T96
IM1.4.6 Find a linear transformation.	SE: 66-68 TWE: T66-T68
IM1.4.7 Construct a stem-and-leaf plot using a graphing calculator.	See Contemporary Mathematics in Context Calculator Software.
IM1.4.8 Find the mean absolute deviation for a set of data.	SE: 63-73 TWE: T63-T73
IM1.4.9 Find the standard deviation and describe its properties.	SE: 72, 73 TWE: T72, T73
IM1.4.10 Construct a frequency table for a set of data.	SE: 15-31, 485 TWE: T15-T31, T485

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<b>OBJECTIVES</b>	<b>PAGE REFERENCES</b>
IM1.4.11 Summarize and interpret sets of data using center and variability.	SE: 16, 31-47, 47-73, 92, 94 TWE: T16, T31-T47, T47-T73, T92, T94
IM1.4.12 Construct a scatterplot from a set of data.	SE: 74-75, 85-93, 193, 208-209 TWE: T74-T75, T85-T93, T193, T208-T209
IM1.4.13 Calculate the sum of squared differences for a set of data.	SE: 73 TWE: T73
IM1.4.14 Plot the least square regression line from a set of data.	SE: 165-169, 197, 202-204, 207-209 TWE: T165-T169, T197, T202-T204, T207-T209
IM1.4.15 Compare sets of data using scatterplots and the line $y = x$ , and interpret these comparisons for real-world data.	SE: 74-75, 85-93 TWE: T74-T75, T85-T93
IM1.4.16 Recognize patterns in tables and graphs that are modeled by linear equations.	SE: 158-249, 423, 434, 470, 472, 480 TWE: T158-T249, T423, T434, T470, T472, T480
<b>Standard 5: Probability</b>	
IM1.5.1 Design and use simulations in order to estimate answers related to probability.	SE: 487-490, 491-497, 498-504, 505-512, 513-518, 519-525, 527 TWE: T487-T490, T491-T497, T498-T504, T505-T512, T513-T518, T519-T525, T527
IM1.5.2 Use empirical (experimental) and theoretical probabilities.	SE: 498-512, 513-526 TWE: T498-T512, T513-T526

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<b>OBJECTIVES</b>	<b>PAGE REFERENCES</b>
IM1.5.3 Understand independent events.	SE: 495 TWE: T495
IM1.5.4 Use the Law of Large Numbers to understand situations involving chance.	SE: 513–518, 519–525, 527 TWE: T513–T518, T519–T525, T527
IM1.5.5 Understand the concept of a probability distribution. Understand how an approximate probability can be constructed using simulation involving chance.	SE: 16–18, 513-526 TWE: T16–T18, T513-T526
<b>Standard 6: Discrete Mathematics</b>	
IM1.6.1 Construct vertex-edge graph models involving relationships among a finite number of elements.	SE: 250-255, 259-264, 348–349, 533 TWE: T250-T255, T259-T264, T348–T349, T533
IM1.6.2 Construct digraphs.	SE: 295-320 TWE: T295-T320
IM1.6.3 Use Euler paths and circuits to solve real-world problems.	SE: 250-276 TWE: T250-T276
IM1.6.4 Develop the skill of algorithmic problem solving: designing, using, and analyzing systematic procedures for problem solving.	SE: 250-323 TWE: T250-T323
IM1.6.5 Use a recursion function to describe an exponential function.	SE: 422-424, 427, 432, 436-437, 440-442, 443-448 TWE: T422-T437, T440-T442, T443-T448

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<b>OBJECTIVES</b>	<b>PAGE REFERENCES</b>
IM1.6.6 Use a variety of recursion equations to describe a function.	SE: 110-120, 183, 422-430, 430-437, 441-447  TWE: T110-T120, T183, T422-T430, T430-T437, T441-T447
IM1.6.7 Use a recursion function to describe a fractal.	SE: 427, 432, 436  TWE: T427, T432, T436
IM1.6.8 Use an adjacency matrix to describe a vertex-edge graph.	SE: 269–270, 272, 274, 276, 305  TWE: T269–T270, T272, T274, T276, T305
IM1.6.9 Perform row and column sums for matrix equations.	SE: 269–270, 272, 274, 276, 305  TWE: T269–T270, T272, T274, T276, T305
<b>Standard 7: Mathematical Reasoning and Problem Solving</b>	
IM1.7.1 Use a variety of problem solving strategies, such as drawing a diagram, making a chart, guess-and-check, solving a simpler problem, writing an equation, and working backwards.	SE: 210-242, 252, 295-320  TWE: T210-T242, T252, T295-T320
IM1.7.2 Decide whether a solution is reasonable in the context of the original situation.	SE: 102, 162, 211-214, 256, 420  TWE: T102, T162, T211-T214, T256, T420
IM1.7.3 Use the properties of the real number system and the order of operations to justify the steps of simplifying functions and solving equations.	SE: 233-238, 239-242  TWE: T233-T238, T239-T242

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<b>OBJECTIVES</b>	<b>PAGE REFERENCES</b>
IM1.7.4 Understand that the logic of equation solving begins with the assumption that the variable is a number that satisfies the equation, and that the steps taken when solving equations create new equations that have, in most cases, the same solution set as the original. Understand that similar logic applies to solving systems of equations simultaneously.	SE: 211-214, 215-242  TWE: T211-T214, T215-T242
IM1.7.5 Decide whether a given algebraic statement is true always, sometimes, or never (statements involving linear or quadratic expressions, equations, inequalities).	SE: 226–228, 231  TWE: T226–T228, T231
IM1.7.6 Distinguish between inductive and deductive reasoning, identifying, and providing examples of each.	This objective falls within the content coverage for Course 3 SE: 267, 269-271, 275  TWE: T267, 269-271, T275
IM1.7.7 Use counterexamples to show that statements are false, recognizing that a single counterexample is sufficient to prove a general statement false.	SE: 263, 360, 371, 379  TWE: T263, T360, T371, T379

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