

Correlation of Competencies Assessed with
the Ohio High School Graduation Qualifying Examination -- Mathematics
with
Bridges
to Algebra and Geometry, 2nd edition
SE: 0-53 8-68713-4

Unless indicating differently, the references in the right columns are to chapters and lessons in the Student Editions of ***COR'D's Algebra 1*** and ***COR'sD Geometry***. For example, 4.5 indicates Chapter 4 Lesson 5. Review of competencies may be found in the last sections of later lessons; these sections are titled "Mixed Review." Additional instructional and assessment materials may be found in the Math Labs and Math Applications in the indicated chapters, and in ancillary materials for the lessons. Ancillary materials include Teacher's Resource Books, Supplementary Worksheets, and Software Generated Assessment packages.

Strand Competencies	<i>COR'D Bridges to Algebra and Geometry</i>	Comments
Number and Numeracy		
1. represent and use real numbers in a variety of equivalent forms.	See Lessons 1.1, 1.2, 3.1, 5.1, 5.2, 6.1, 6.2, 6.4, 7.1, 10.1, 10.2, 10.3, 10.5, and 11.3.	Add: 5.3, 8.1, 8.4
2. estimate and compute with real numbers.	See Lessons 1.2, 1.4, 1.5, 1.6, 1.7, 2.1, 2.7, 3.3, 3.4, 3.5, 3.6, 3.7, 5.4, 5.5, 5.6, 6.3, 6.6, 6.7, 6.8, 7.2, 7.3, 7.4, 7.5, 7.6, 10.3, 10.4, 10.5, 10.6, 11.3, 11.4, 11.6, 11.7, 12.2, 12.3, 12.4, 12.5, and 12.6.	Add: 4.6, 11.5
3. apply rates, ratios, proportions, and percents	See Lessons 6.1, 6.2, 6.3, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 11.2, 11.3, 11.4, 11.6, and 12.6.	Add: 8.3

Strand Competencies	<i>CORD Bridges to Algebra and Geometry</i>	Comments
Algebra and Functions		
4. write, interpret, simplify, evaluate, and/or use algebraic expressions and formulas	See Lessons 1.3, 4.6, 11.5, 11.6, 11.7, 12.2, 12.3, 12.4, 12.5, and 12.6.	Add: 4.1, 4.2, 4.3, 4.4, 4.5, 5.7, 5.8, 7.6, 10.6
5. use linear equations and inequalities.	See Lessons 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 5.7, 5.8, 10.6, 11.5, 11.6, 11.7, 12.2, 12.3, 12.4, 12.5, and 12.6.	Add: 7.4, 8.2, 8.5, 8.6
6. represent a mathematical relationship using a table, graph, symbols, and words, and describe how a change in the value of one variable affects the value of a related variable.	See Lessons 2.1, 5.1, 6.1, 6.3, 7.5, 7.6, 8.5, 9.6, 9.7, 9.8, 10.4, 11.2, 11.3, 11.4, 11.6, 12.4, and 12.6; and Math Lab Activities on pages 180-181, 226-228, 288-289, 338-339, 339-341, 341-343, 391-392, 393-395, 453-455, 566-568, 630-631, 635-637, 687-689, 689-690, and 691-691.	
7. create and analyze graphs of linear and simple non-linear functions.	See Lessons 8.2, 8.3, 8.4, 8.5, 8.7.	

Strand Competencies	<i>CORD Bridges to Algebra and Geometry</i>	Comments
Geometry and Measurement		
8. apply angle relationships to situations involving intersecting lines, perpendicular lines, and parallel lines.	See Lessons 8.5, 9.5, and 9.7, and Math Lab, pp. 515-517.	
9. recognize and apply characteristics of congruent and similar figures.	See Lessons 9.3, 9.5, 11.2, 11.3, 11.4, and 11.6.	Add: 12.6
10. apply visualization, spatial sense, and properties of two-dimensional figures and three-dimensional objects.	See Lessons 1.1, 1.2, 1.4, 1.6, 1.7, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 4.1, 4.4, 4.6, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 6.1, 6.3, 6.4, 6.5, 6.6, 6.7, 7.5, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 10.6, 11.1, 11.2, 11.3, 11.4, 1.5, 11.6, 11.7, 12.1, 12.2, 12.3, 12.4, 12.5, and 12.6.	
11. use mathematical techniques including scale drawings, formulas, and geometric relationships to find length, perimeter, area, surface area, and volume.	See Lessons 1.4, 1.6, 3.2, 3.5, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 6.3, 6.4, 6.6, 8.2, 9.3, 9.4, 10.6, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7, 12.2, 12.3, 12.4, 12.5, and 12.6.	

Strand Competencies	<i>CORD Bridges to Algebra and Geometry</i>	Comments
Data Analysis and Probability		
12. create, interpret and/or analyze tables, charts, and graphs involving data.	<p>See Lessons 1.1, 1.2, 1.3, 1.4, 1.5, 1.7, 1.8, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 4.1, 4.2, 4.5, 4.6, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 6.1, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 7.2, 7.3, 7.4, 7.5, 7.6, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 9.2, 9.4, 9.5, 9.6, 9.7, 9.8, 10.1, 10.2, 10.4, 10.5, 10.6, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7, 12.1, 12.2, 12.3, 12.4, 12.5, and 12.6.</p> <p>Also, Math Lab Activities in each chapter involve collecting, displaying, and interpreting data. Data Collection Sheets as well as Supplementary Labs are found in the Supplementary Worksheets.</p>	
14. represent and interpret the possible outcomes for a mathematical situation and calculate probabilities.	See Lessons 6.4, 6.5, 6.6, 6.7, and 6.8.	

Strand Competencies	<i>CORD Bridges to Algebra and Geometry</i>	Comments
Mathematical Processes		
<p>15. communicate mathematical ideas, reasoning, and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.</p>	<p>Throughout <i>CORD Bridges to Algebra and Geometry</i>, students are prompted to communicate their ideas, reasoning, and solutions with appropriate mathematical terminology.</p> <p>Lesson Activities prompt students to do, observe, and explain. For example, see Activities in Lessons 2.6, 2.7, 3.7, 7.3, 8.7, 9.3, and 11.4..</p> <p>Every Lesson Assessment begins with a section titled “Think and Discuss.” For example, see Lessons 4.6, 5.7, 6.3, 7.2, 8.5, and 10.1.</p> <p>Critical Thinking questions ask students to extend what has been presented in the Lessons to construct new knowledge. For example, see Lessons 7.5, 8.2, 9.3, 10.5, and 12.2..</p> <p>Math Lab Activities in every chapter also prompt students to do, observe, and explain.</p>	

Strand Competencies	<i>CORD Bridges to Algebra and Geometry</i>	Comments
Mathematical Processes, cont'd.		
<p>16. apply problem-solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solution.</p>	<p>The overriding characteristic of each of the programs in the CORD Mathematics in Context series is an inherent demonstration that mathematics can be identified and used in a wealth of contexts, and that presenting mathematical ideas within contexts enhances students' learning.</p> <p>Problem solving is pervasive in <i>CORD Bridges to Algebra and Geometry</i>. See Lesson 1.8, and</p> <p>Problem Solving: Using the Four-Step Plan on pages 53, 103, 165, 200, 258, 306, 377, 422, 476, 546, 609, and 652;</p> <p>Cumulative Problem Solving sets on pages 21-23, 33-35, 56-58, 97-99, 114-116, 146-147, 160-161, 174-175, 196, 197, 208-210, 222-223, 271-272, 283-284, 309-310, 320-321, 336-337, 360-361, 372-373, 386-388, 410-412, 426-427, 447-448, 478-479, 511-512, 535, 549-550, 564-565, 591-592, 603-604, 628-629, 662-663, and 678-679.</p> <p>In addition, contextual problems are found in</p> <p>Lesson development – for example, see pages 70-75, 162-167, 211-216, 217-223, 381-388, and 480-487;</p> <p>Lesson Activities – for example, see pages 140-147, 148-153, 154-161, 261-265, 405-412, 413-418, and 501-505;;</p> <p>Examples in Lessons – for example, see pages 311-315, 405-412, 473-479, and 599-604; and</p> <p>Math Labs in every chapter – for example, see pages 285-289, 389-395, and 449-455.</p>	