



**Correlation of**

***CORD Geometry: Mathematics in Context,***  
**CORD Communications, © 2004**  
**(158373360)**

**to**

**Pennsylvania's Academic Standards**  
**for Mathematics**

**Correlation to Pennsylvania’s Academic Standards for Mathematics, Grade 11**

**Submission Title: *CORD Geometry: Mathematics in Context*, CORD Communications, © 2004 (1578373360)**

**Publisher: CORD Communications**

STANDARDS	PAGE REFERENCES
<i>Pennsylvania’s public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to...</i>	
<b>2.1. Numbers, Number Systems and Number Relationships</b>	
2.1.11.A. Use operations such as opposite, reciprocal, absolute value, raising to a power, finding roots and logarithms.	pp. 11, 13, 14, 101, 105, 113, 171, 225, 264, 288, 312, 329, 336-337, 341-344-350, 393, 400, 407, 421-425, 432, 458, 461, 467, 478, 484, 489, 518-521, 527, 537, 545, 559, 598-622, 629, 632-636,
<b>2.2 Computation and Estimation</b>	
2.2.11.A. Develop and use computation concepts, operations and procedures on real numbers in problem solving situations.	pp. 44-63, 115-135, 184-199, 237-250, 291-305, 367-385, 438-453, 497-513, 564-577, 642-660, 712-728
2.2.11.B. Use estimation to solve problems for which exact answer is not needed.	pp. 324, 342, 358, 361, 365, 393, 505, 653
2.2.11.C. Construct and apply mathematical models, including lines and curves of best fit, to estimate values of related quantities.	pp. 15, 69-70, 82, 106, 156, 226, 318, 403, 414, 447, 449, 453, 460, 483, 626, 628,
2.2.11.D. Describe and explain the amount of error that may exist in a computation using estimates.	The authors recognize the importance of an integrated curriculum but inclusion of this objective would result in a longer text or elimination of important geometric concepts.
2.2.11.E. Recognize that the degree of precision needed in calculating a number depends on how the results will be used and the instruments used to generate the measure.	The authors recognize the importance of an integrated curriculum but inclusion of this objective would result in a longer text or elimination of important geometric concepts.
2.2.11.F. Demonstrate skills for using computer spreadsheets and scientific and graphing calculators.	pp. 141-142, 144
<b>2.3 Measurement and Estimation</b>	
2.3.11.A. Select and use appropriate units and tools to measure to the degree of accuracy required in particular measurement situations.	pp. 12-25, 44-45, 48-50, 184-186, 237-239, 291-296, 367-369, 371-372, 438-439, 441-443, 497-501, 564-567, 642-643, 647-649, 716-718
2.3.11.B. Measure and compare angles in degrees and radians.	pp. 19-25, 367-369, 718-720
2.3.11.C. Determine relationships between linear, square and cubic measures and describe how changes in one of the measures of the figure affect the others.	pp. 461, 605, 607, 629
2.3.11.D. Demonstrate ability to produce measures with specified levels of precision.	pp. 12-25, 44-45, 48-50, 184-186, 237-239, 291-296, 367-369, 371-372, 438-439, 441-443, 497-501, 564-567, 642-643, 647-649, 716-718

**Correlation to Pennsylvania’s Academic Standards for Mathematics, Grade 11**

**Submission Title: *CORD Geometry: Mathematics in Context*, CORD Communications, © 2004 (1578373360)**

**Publisher: CORD Communications**

STANDARDS	PAGE REFERENCES
<b>2.4 Mathematical Reasoning and Connections</b>	
2.4.11.A. Use direct proofs, indirect proofs, or proof by contradiction to validate conjectures.	pp. 68-109, 113, 147, 150, 160, 173, 177, 213, 216-219, 229-230, 265, 276, 278, 286, 315, 326, 342, 404, 408, 422, 437, 530-531
2.4.11.B. Construct valid arguments from stated facts.	pp. 68-109, 113, 147, 150, 160, 173, 177, 213, 216-219, 229-230, 265, 276, 278, 286, 315, 326, 342, 404, 408, 422, 437, 530-531
2.4.11.C. Determine the validity of an argument.	pp. 71, 80-84, 167, 173, 176, 231, 329, 342
2.4.11.D. Use truth tables to reveal the logic of mathematical statements.	pp. 115-120
2.4.11.E. Demonstrate mathematical solutions to problems in the physical sciences.	pp. 58-59, 97, 124, 156, 165, 196, 213, 326-327, 329, 365, 511, 553, 560
<b>2.5 Mathematical Problem Solving and Communication</b>	
2.5.11.A. Select and use appropriate mathematical concepts and techniques from different areas of mathematics and apply them to solving non-routine and multi-step problems.	pp. 44-63, 115-135, 184-199, 237-250, 291-305, 367-385, 438-453, 497-513, 564-577, 642-660, 712-728
2.5.11.B. Use symbols, mathematical terminology, standard notation, mathematical rules, graphing and other types of mathematical representations to communicate observations, predictions, concepts, procedures, generalizations, ideas and results.	pp. 9, 16, 24, 33, 42, 48, 64, 71, 78, 83, 92, 100, 107, 112, 122, 136, 145, 152-153, 159, 168, 176, 183, 200, 208, 215, 222, 228, 235, 251, 260, 266, 270, 276, 282, 289, 306, 314, 320, 325, 333, 339, 346, 351, 358, 363, 394-395, 402, 410, 418, 435, 454, 462, 468, 475, 475, 479, 484, 494-495, 522, 530, 538, 546, 555, 561, 578, 586, 593, 601, 609, 617, 622, 629, 661, 671, 678, 685, 691, 696, 703, 709, 729
2.5.11.C. Present mathematical procedures and results clearly, systematically, succinctly and correctly.	pp. 9, 16, 24, 33, 42, 48, 64, 71, 78, 83, 92, 100, 107, 112, 122, 136, 145, 152-153, 159, 168, 176, 183, 200, 208, 215, 222, 228, 235, 251, 260, 266, 270, 276, 282, 289, 306, 314, 320, 325, 333, 339, 346, 351, 358, 363, 394-395, 402, 410, 418, 435, 454, 462, 468, 475, 475, 479, 484, 494-495, 522, 530, 538, 546, 555, 561, 578, 586, 593, 601, 609, 617, 622, 629, 661, 671, 678, 685, 691, 696, 703, 709, 729
2.5.11.D. Conclude a solution process with a summary of results and evaluate the degree to which the results obtained represent an acceptable response to the initial problem and why the reasoning is valid.	pp. 48, 120-122, 186, 237, 291-292, 369, 371, 439, 441, 499, 501, 565, 720

**Correlation to Pennsylvania’s Academic Standards for Mathematics, Grade 11**

**Submission Title: *CORD Geometry: Mathematics in Context*, CORD Communications, © 2004 (1578373360)**

**Publisher: CORD Communications**

STANDARDS	PAGE REFERENCES
<b>2.6 Statistics and Data Analysis</b>	
2.6.11.A. Design and conduct an experiment using random sampling, describe the data as an example of a distribution using statistical measures of center and spread, and organize and represent the results with graphs. (Use standard deviation, variance and t-tests.)	The authors recognize the importance of an integrated curriculum but this is a geometry text. To include this level of statistics and data analysis would require a much longer text or a shallower depth of study of the geometry topics.
2.6.11.B. Use appropriate technology to organize and analyze data taken from the local community.	The authors recognize the importance of an integrated curriculum but this is a geometry text. To include this level of statistics and data analysis would require a much longer text or a shallower depth of study of the geometry topics.
2.6.11.C. Determine regression equation of best fit (e.g., linear, quadratic, and exponential).	The authors recognize the importance of an integrated curriculum but this is a geometry text. To include this level of statistics and data analysis would require a much longer text or a shallower depth of study of the geometry topics.
2.6.11.D. Make predictions using interpolation, extrapolation, regression, and estimation, using technology.	The authors recognize the importance of an integrated curriculum but this is a geometry text. To include this level of statistics and data analysis would require a much longer text or a shallower depth of study of the geometry topics.
2.6.11.E. Determine the validity of the sampling method described in a given study.	The authors recognize the importance of an integrated curriculum but this is a geometry text. To include this level of statistics and data analysis would require a much longer text or a shallower depth of study of the geometry topics.
2.6.11.F. Determine the degree of dependence of two quantities specified by a two-way table.	The authors recognize the importance of an integrated curriculum but this is a geometry text. To include this level of statistics and data analysis would require a much longer text or a shallower depth of study of the geometry topics.
2.6.11.G. Describe questions of experimental design, use of control groups, treatment groups, cluster sampling and reliability.	The authors recognize the importance of an integrated curriculum but this is a geometry text. To include this level of statistics and data analysis would require a much longer text or a shallower depth of study of the geometry topics.
2.6.11.H. Use sampling techniques to draw inferences about large populations.	The authors recognize the importance of an integrated curriculum but this is a geometry text. To include this level of statistics and data analysis would require a much longer text or a shallower depth of study of the geometry topics.
2.6.11.I. Describe the normal curve and use its properties to answer questions about	The authors recognize the importance of an integrated curriculum but this is a

**Correlation to Pennsylvania’s Academic Standards for Mathematics, Grade 11**

**Submission Title: *CORD Geometry: Mathematics in Context*, CORD Communications, © 2004 (1578373360)**

**Publisher: CORD Communications**

STANDARDS	PAGE REFERENCES
sets of data that are assumed to be normally distributed.	geometry text. To include this level of statistics and data analysis would require a much longer text or a shallower depth of study of the geometry topics.
<b>2.7 Probability and Predictions</b>	
2.7.11.A Compare odds and probability.	The authors recognize the importance of an integrated curriculum but this is a geometry text. To include this level of probability would require a much longer text or a shallower depth of study of the geometry topics.
2.7.11.B. Apply probability and statistics to perform an experiment involving a sample and generalize its results to the entire population.	The authors recognize the importance of an integrated curriculum but this is a geometry text. To include this level of probability would require a much longer text or a shallower depth of study of the geometry topics.
2.7.11.C. Draw a conclusion regarding the validity of a probability or statistical argument and justify conclusion.	The authors recognize the importance of an integrated curriculum but this is a geometry text. To include this level of probability would require a much longer text or a shallower depth of study of the geometry topics.
2.7.11.D. Use experimental and theoretical probability distributions to make judgments about the likelihood of various outcomes in uncertain situations.	pp. 492-496
2.7.11.E. Solve problems involving independent simple and compound events.	The authors recognize the importance of an integrated curriculum but this is a geometry text. To include this level of probability would require a much longer text or a shallower depth of study of the geometry topics.
<b>2.8 Algebra and Functions</b>	
2.8.11.A. Analyze a given set of data for the existence of a pattern and represent the pattern algebraically and graphically.	pp. 68-73
2.8.11.B. Give examples of patterns that occur in data from other disciplines.	pp. 68-73
2.8.11.C. Use patterns, sequences and series to solve routine and non-routine problems.	pp. 68-73
2.8.11.D. Formulate expressions, equations, inequalities, systems of equations, systems of inequalities, and matrices to model routine and non-routine problem situations.	pp. 142-144, 225, 338, 392, 413-420, 426, 471, 482-483, 626, 628
2.8.11.E. Use equations to represent curves such as lines, circles, ellipses, parabolas and hyperbolas.	pp. 413-420, 446-449, 518-524
2.8.11.F. Identify whether systems of equations and inequalities are consistent or inconsistent.	This objective is more appropriately covered in an Algebra 2 text.
2.8.11.G. Analyze and explain systems of equations, systems of inequalities and	This objective is more appropriately covered in an Algebra 2 text.

**Correlation to Pennsylvania’s Academic Standards for Mathematics, Grade 11**

**Submission Title: *CORD Geometry: Mathematics in Context*, CORD Communications, © 2004 (1578373360)**

**Publisher: CORD Communications**

STANDARDS		PAGE REFERENCES
	matrices.	
2.8.11.H.	Select and use an appropriate strategy to solve systems of equations and inequalities using graphing calculators, symbol manipulators, spreadsheets, and other software.	This objective is more appropriately covered in an Algebra 2 text.
2.8.11.I.	Use matrices to organize and manipulate data, including matrix addition, subtraction, multiplication, and scalar multiplication.	This objective is more appropriately covered in an Algebra 2 text.
2.8.11.J.	Demonstrate the connection between algebraic equations and inequalities and the geometry of relations in the coordinate plane.	pp. 413-420
2.8.11.K.	Select, justify, and apply an appropriate technique to graph a linear function in two variables, including slope-intercept, x- and y- intercepts, graphing by transformations, and the use of a graphing calculator.	pp. 405-420
2.8.11.L.	Write the equation of a line when given the graph of the line, two points on the line, or the slope of the line and a point on the line.	pp. 405-420, 447-449
2.8.11.M.	Given a set of data points, write an equation for a line of best fit.	pp. 413-420
2.8.11.N.	Solve linear, quadratic, and exponential equations both symbolically and graphically.	pp. 413-420
2.8.11.O.	Determine the domain and range of a relation, given a graph or set of ordered pairs.	This objective is covered in <i>CORD Algebra 1</i> .
2.8.11.P.	Analyze a relation to determine whether a direct or inverse variation exists and represent it algebraically and graphically.	This objective is covered in <i>CORD Algebra 1</i> .
2.8.11.Q.	Represent functional relationships in tables, charts, and graphs.	p. 413-417
2.8.11.R.	Create and interpret functional models.	pp. 413-417
2.8.11.S.	Analyze properties and relationships of functions (linear, polynomial, rational, trigonometric, exponential, and logarithmic).	This objective is more appropriately covered in an Algebra 2 text.
2.8.11.T.	Analyze and categorize functions by their characteristics.	This objective is more appropriately covered in an Algebra 2 text.
<b>2.9. Geometry</b>		
2.9.11.A.	Construct geometric figures using dynamic geometry tools (Geometer’s Sketchpad, Cabri Geometre, etc.)	pp. 46-48, 120-122, 186-187, 239-241, 291-292, 369-371, 439-441, 501-503, 567-570, 643-646, 712-715
2.9.11.B.	Prove two triangles or two polygons are congruent or similar using algebraic	pp. 211-230, 241-247

**Correlation to Pennsylvania’s Academic Standards for Mathematics, Grade 11**

**Submission Title: *CORD Geometry: Mathematics in Context*, CORD Communications, © 2004 (1578373360)**

**Publisher: CORD Communications**

STANDARDS	PAGE REFERENCES
and coordinate as well as deductive proofs.	
2.9.11.C. Identify and prove the properties of quadrilaterals involving opposite sides and angles, consecutive sides and angles, and diagonals using deductive proofs.	pp. 268-293
2.9.11.D. Identify corresponding parts in congruent triangles to solve problems.	pp. 204-251
2.9.11.E. Solve problems involving inscribed and circumscribed polygons.	pp. 501-503, 513
2.9.11.F. Use the properties of angles, arcs, chords, tangents, and secants to solve problems involving circles.	pp. 525-556, 565-577
2.9.11.G. Solve problems using analytic geometry.	pp. 390-455
2.9.11.H. Construct a geometric figure and its image using various transformations.	pp. 666-711, 712-715, 721-722
2.9.11.I. Model situations geometrically to formulate and solve problems.	pp. 14-18, 35, 41-45, 48-50, 54-63, 104, 110, 124, 142, 156, 165-166, 174, 181, 190-199, 207-210, 219, 224-225, 231, 236-238, 241-248, 256, 279, 283, 288, 297-305, 315, 324, 330, 344, 350, 360, 361, 373-385, 393, 406, 436, 444-453, 460, 463, 475-476, 485, 492-496, 504-513, 527, 531, 535, 559, 571-577, 601, 606, 610, 650-660, 721-728
2.9.11.J. Analyze figures in terms of the kinds of symmetries they have.	pp. 670, 686-687, 690, 721
<b>2.10. Trigonometry</b>	
2.10.11.A. Use graphing calculators to display periodic and circular functions; describe properties of the graphs.	This objective is more appropriately covered in an Algebra 2 text.
2.10.11.B. Identify, create, and solve practical problems involving right triangles using the trigonometric functions and the Pythagorean Theorem.	pp. 341-347, 369-370, 354-366, 719-720
<b>2.11. Concepts of Calculus</b>	
2.11.11.A. Determine maximum and minimum values of a function over a specified interval.	This objective is more appropriately covered in an Algebra 2 text.
2.11.11.B. Interpret maximum and minimum values in problem situations.	pp. 501-503
2.11.11.C. Graph and interpret rates of growth/decay.	This objective is more appropriately covered in an Algebra 2 text.
2.11.11.D. Determine sums of the finite sequences of numbers and infinite geometric series.	This objective is more appropriately covered in an Algebra 2 text.
2.11.11.E. Estimate areas under curves using sequences of areas.	pp. 507, 628

**Correlation to Pennsylvania’s Academic Standards for Mathematics, Grade 11**  
**Submission Title: *CORD Geometry: Mathematics in Context*, CORD Communications, © 2004 (1578373360)**  
**Publisher: CORD Communications**