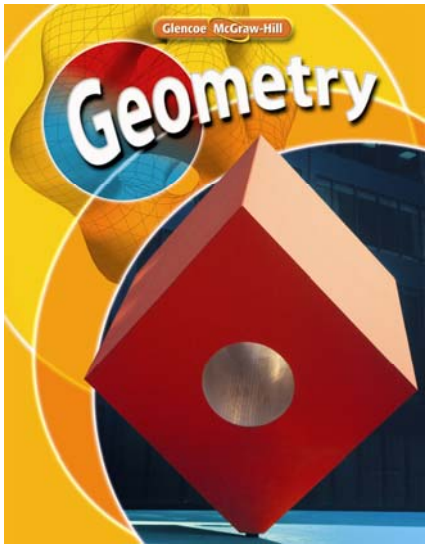
Mathematics Curriculum Framework
Grades 9-12

Connecticut



Geometry

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STANDARDS	PAGE REFERENCES
Algebraic Reasoning: Patterns And Functions – Patterns and functional relationships can be represented and analyzed using a variety of strategies, tools and technologies. **How do patterns and functions help us describe data and physical phenomena and solve a variety of problems?**	
1.1 Understand and describe patterns and functional relationships.	
a. Describe relationships and make generalizations about patterns and functions.	**Student Edition:** 78-82, 90 #56-#61 *Geometry Lab* 320 *Graphing Calculator Lab* 387 **Teacher Wraparound Edition** AE 79, 80; GL 320; PA 79; T 387; TNT 79
1.2 Represent and analyze quantitative relationships in a variety of ways.	
a. Represent and analyze linear and nonlinear functions and relations symbolically and with tables and graphs.	**Student Edition:** 165-170, 176 #7, 179 #39-#42, 193 #19-#23, 195 #12-#15 *Geometry Lab* 171 *Graphing Calculator Lab* 180 **Teacher Wraparound Edition** A 170; AE 166, 167; T 180

Codes used for Teacher Wraparound Edition pages are the initial caps of headings on that page.

STANDARDS	PAGE REFERENCES
1.3 Use operations, properties and algebraic symbols to determine equivalence and solve problems.	
a. Manipulate equations, inequalities and functions to solve problems.	**Student Edition:** 156-163, 165-170, 175 ex 4, 184 ex 3, 187 #42-#43, 192 #14 *Geometry Lab* 171 *Graphing Calculator Lab* 180 **Teacher Wraparound Edition** A 163; AE 157, 158, 159, 166, 167, 175; GL 158; PA 163, 187; T 171
Numerical and Proportional Reasoning – Quantitative relationships can be expressed numerically in multiple ways in order to make connections and simplify calculations using a variety of strategies, tools and technologies. **How are quantitative relationships represented by numbers?**	
2.1 Understand that a variety of numerical representations can be used to describe quantitative relationships.	
a. Extend the understanding of number to include integers, rational numbers and real numbers.	**Student Edition:** 778-779, 790-791, 798-799, 843 #1-#2, 846 #1-#4, 850 #1-#4, 855 #1-#2
b. Interpret and represent large sets of numbers with the aid of technologies.	**Student Edition:** 85, 86 ex 3, 88 #25-#28
2.2 Use numbers and their properties to compute flexibly and fluently, and to reasonably estimate measures and quantities.	
a. Develop strategies for computation and estimation using properties of number systems to solve problems.	**Student Edition:** 5 #6-#9, 778-779, 790-791, 798-799, 843 #1-#2, 846 #1-#4, 850 #1-#4, 855 #1-#2
b. Solve proportional reasoning problems.	**Student Edition:** 380 ex 1, 382 ex 4, 383 #8-#11, 384 #30-#34, 385 #35-#36, 389 ex 2, 391 ex 5, 392 #3, 393 #20-#21, 394 #24-#25, 400 ex 3, 401 #12-#13, 408 ex 4, 410 #10 **Teacher Wraparound Edition** AE 381, 382, 389, 390, 391, 408

STANDARDS	PAGE REFERENCES
Geometry and Measurement – Shapes and structures can be analyzed, visualized, measured and transformed using a variety of strategies, tools and technologies. **How do geometric relationships and measurements help us to solve problems and make sense of our world?**	
3.1 Use properties and characteristics of two- and three-dimensional shapes and geometric theorems to describe relationships, communicate ideas and solve problems.	
a. Investigate relationships among plane and solid geometric figures using geometric models, constructions and tools.	**Student Edition:** 682 ex 3, 683 #14-#19, 684 #33-#35, 691 #41-#43 *Construction* 16, 25, 33, 35, 182, 186, 266, 268, 409, 413 *Geometry Lab* 48, 681 **Teacher Wraparound Edition** A 48; AE 682; GL 681
b. Develop and evaluate mathematical arguments using reasoning and proof.	**Student Edition:** 79 ex 3, 80 #5-#6, 81 #25-#30, 82 #38, 92 ex 3, 94 #6-#8, 95 #27-#30, 96 #37-#42, 98 #1-#4, 99-104, 105-109, 110 #1-#3, 111-117, 134 #17-#24, 135 #25-#28, 137 #1-#3, 138 #1 **Teacher Wraparound Edition** AE 100, 101, 112
3.2 Use spatial reasoning, location and geometric relationships to solve problems.	
a. Verify geometric relationships using algebra, coordinate geometry, and transformations.	**Student Edition:** 111-117, 251-255, 260 #30-#32, 497-503, 504-509, 510-517, 525-532 *Geometry Lab* 496 **Teacher Wraparound Edition** A 117, 255, 503; AE 112, 113, 252, 253, 498, 499, 505, 511; PA 109
3.3 Develop and apply units, systems, formulas and appropriate tools to estimate and measure.	
a. Solve a variety of problems involving 1-, 2-, and 3-dimensional measurements using geometric relationships and trigonometric ratios.	**Student Edition:** 456-462, 463 #10-#13, 464-470, 471-477, 479-485 *Geometry Software Lab* 478 *Graphing Calculator Lab* 455 **Teacher Wraparound Edition** A 455, 470, 485; AE 457, 458, 459, 473, 474, 480, 481; PA 459, 465, 485

STANDARDS	PAGE REFERENCES
Working with Data: Probability and Statistics – Data can be analyzed to make informed decisions using a variety of strategies, tools and technologies. **How can collecting, organizing and displaying data help us analyze information and make reasonable predictions and informed decisions?**	
4.1 Collect, organize and display data using appropriate statistical and graphical methods.	
a. Create the appropriate visual or graphical representation of real data.	**Student Edition:** 567 #29-#31, 851 #18, 856 #8
4.2 Analyze data sets to form hypotheses and make predictions.	
a. Analyze real-world problems using statistical techniques.	**Student Edition:** 565 ex 3, 567 #9, 670 #19-#22, 843 #9, 847 #17-#18, 851 #19-#20, 856 #8
4.3 Understand and apply basic concepts of probability.	
a. Understand and apply the principles of probability in a variety of situations.	**Student Edition:** 587 #19, 665-671, 674 #23-#25, 675 #11-#13, 847 #19, 856 #9