

# GEOMETRY CURRICULUM FRAMEWORKS

(Geometry 9, Geometry, Honors Geometry)

## GEOMETRY AND MEASUREMENT (encompasses 28-32% of MCA test items)

**Standard 1:** Calculate measurements of plane and solid geometric figures; know that physical measurements depend on the choice of a unit and that they are approximations.

Curriculum Benchmark	MCA III Test Item Specifications	Where Benchmark is Taught/Assessed in “Geometry Concepts and Skills” Student Edition *	Notes
<p>Determine the surface area and volume of pyramids, cones and spheres. Use measuring devices or formulas as appropriate. (9.3.1.1)</p> <p>For example: Measure the height and radius of a cone and then use a formula to find its volume.</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: sphere and vocabulary given at previous grades</li> </ul>	<p>McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 491-494, 495-499, 507, 508-509, 510-512, 513-516, 517-519, 519-523, 525-527, 528, 529, 533, 562, 575, 651, 691-692, 700</p>	
<p>Compose and decompose two- and three-dimensional figures; use decomposition to determine the perimeter, area, surface area and volume of various figures. (9.3.1.2)</p> <p>For example: Find the volume of a regular hexagonal prism by decomposing it into six equal triangular prisms.</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: regular polygon, sphere, compose, decompose and vocabulary given at previous grades</li> </ul>	<p>McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 426, 427-429, 430, 435-436, 437, 439, 441, 443-444, 446, 450, 451, 454-455, 457-459, 461, 464, 465, 472, 473-474, 478, 481-482, 483-485, 488-489, 490, 492-493, 497-498, 500, 503-504, 508-509, 510, 515, 518-519, 522, 528, 529, 575, 650, 689-690, 700</p>	
<p>Understand that quantities associated with physical measurements must be assigned units; apply such units correctly in expressions, equations and problem solutions that involve measurements; and convert between measurement systems. (9.3.1.3)</p> <p>For example: <math>60 \text{ miles/hour} = 60 \text{ miles/hour} \times 5280 \text{ feet/mile} \times 1 \text{ hour}/3600 \text{ seconds} = 88 \text{ feet/second}</math>.</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: vocabulary given at previous grades</li> </ul>	<p>McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 28-29, 31, 36, 227, 424-426, 427-428, 500-502, 503-507</p>	
<p>Understand and apply the fact that the effect of a scale factor <math>k</math> on length, area and volume is to multiply each by <math>k</math>, <math>k^2</math> and <math>k^3</math>, respectively. (9.3.1.4)</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: scale factor, magnitude and vocabulary given at previous grades</li> </ul>	<p>McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 368, 370, 394, 397, 404, 433, 435, 438, 448, 456, 502, 506, 514, 521, 528-529, 692</p>	
<p>Make reasonable estimates and judgments about the accuracy of values resulting from calculations involving measurements. (9.3.1.5)</p> <p>For example: Suppose the sides of a rectangle are measured to the nearest tenth of a centimeter at 2.6 cm and 9.8 cm. Because of measurement errors, the width could be as small as 2.55 cm or as large as 2.65 cm, with similar errors for the height. These errors affect calculations. For instance, the actual area of the rectangle could be smaller than <math>25 \text{ cm}^2</math> or larger than <math>26 \text{ cm}^2</math>, even though <math>2.6 \times 9.8 = 25.48</math>.</p>	<ul style="list-style-type: none"> <li>Assessed within 9.3.1.1 through 9.3.1.4</li> </ul>	<p>McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 584-585, 711, 717-718</p>	

\* McDougal Littell “Geometry Concepts and Skills” is used for the Geometry course.

# GEOMETRY CURRICULUM FRAMEWORKS

(Geometry 9, Geometry, Honors Geometry)

## GEOMETRY AND MEASUREMENT (encompasses 28-32% of MCA test items) (continued)

**Standard 2:** Construct logical arguments, based on axioms, definitions and theorems, to prove theorems and other results in geometry.

Curriculum Benchmark	MCA III Test Item Specifications	Where Benchmark is Taught/Assessed in "Geometry Concepts and Skills" Student Edition*	Notes
Understand the roles of axioms, definitions, undefined terms and theorems in logical arguments. (9.3.2.1)	<ul style="list-style-type: none"> <li>Assessed within 9.3.2.2 and 9.3.2.4</li> </ul>	McDougal Littell "Geometry Concepts and Skills" 2005 SE pages: 14, 69, 90, 92, 243	
<p>Accurately interpret and use words and phrases such as "if...then," "if and only if," "all," and "not." Recognize the logical relationships between an "if...then" statement and its inverse, converse and contrapositive. (9.3.2.2)</p> <p>For example: The statement "If you don't do your homework, you can't go to the dance" is not logically equivalent to its inverse "If you do your homework, you can go to the dance."</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: inverse, converse, contrapositive, negation and vocabulary given at previous grades</li> </ul>	McDougal Littell "Geometry Concepts and Skills" 2005 SE pages: 82-84, 85-87, 94, 97, 98, 99, 113, 136-139, 139-140, 168, 678, 697	
Assess the validity of a logical argument and give counterexamples to disprove a statement. (9.3.2.3)	<ul style="list-style-type: none"> <li>Assessed within 9.3.2.4</li> </ul>	McDougal Littell "Geometry Concepts and Skills" 2005 SE pages: 10, 11-13, 20, 33, 43, 47, 83-84, 85-87, 94, 97, 98, 649, 675, 697	
<p>Construct logical arguments and write proofs of theorems and other results in geometry, including proofs by contradiction. Express proofs in a form that clearly justifies the reasoning, such as two-column proofs, paragraph proofs, flow charts or illustrations. (9.3.2.4)</p> <p>For example: Prove that the sum of the interior angles of a pentagon is <math>540^\circ</math> using the fact that the sum of the interior angles of a triangle is <math>180^\circ</math>.</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: contradiction and vocabulary given at previous grades</li> </ul>	McDougal Littell "Geometry Concepts and Skills" 2005 SE pages: 242-244, 245-247, 249, 251-253, 253-256, 258-259, 260-262, 263, 265, 267, 269-270, 273, 275, 279, 289, 293-294, 296, 297, 351, 683-684	
Use technology tools to examine theorems, make and test conjectures, perform constructions and develop mathematical reasoning skills in multi-step problems. The tools may include compass and straight edge, dynamic geometry software, design software or Internet applets. (9.3.2.5)	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: angle bisector, perpendicular bisector, midpoint of a segment and vocabulary given at previous grades</li> </ul>	McDougal Littell "Geometry Concepts and Skills" 2005 SE pages: 11, 19, 33, 66, 72, 141, 143-144, 148, 150-151, 158, 183, 187, 190, 191, 199, 216, 241, 264, 272, 279, 308, 321, 324, 331, 393, 340, 385, 392, 399, 438, 449, 521, 546, 567, 594, 624, 626, 640	

\* McDougal Littell "Geometry Concepts and Skills" is used for the Geometry course.

# GEOMETRY CURRICULUM FRAMEWORKS

(Geometry 9, Geometry, Honors Geometry)

## GEOMETRY AND MEASUREMENT (encompasses 28-32% of MCA test items) (continued)

**Standard 3:** Know and apply properties of geometric figures to solve real world and mathematical problems and to logically justify results in geometry.

Curriculum Benchmark	MCA III Test Item Specifications	Where Benchmark is Taught/Assessed in “Geometry Concepts and Skills” Student Edition*	Notes
<p>Know and apply properties of parallel and perpendicular lines, including properties of angles formed by a transversal, to solve problems and logically justify results. (9.3.3.1)</p> <p>For example: Prove that the perpendicular bisector of a line segment is the set of all points equidistant from the two endpoints, and use this fact to solve problems and justify other results.</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: transversal, interior, exterior, corresponding, alternate and vocabulary given at previous grades</li> </ul>	<p>McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 108-109, 110-113, 114-116, 117-120, 121-122, 123-125, 126-127, 128-131, 132-135, 136-139, 139-142, 143-146, 147-149, 150-151, 159, 161-163, 164, 165, 169, 184, 249, 263, 271, 290, 308, 315, 330, 350</p>	
<p>Know and apply properties of angles, including corresponding, exterior, interior, vertical, complementary and supplementary angles, to solve problems and logically justify results. (9.3.3.2)</p> <p>For example: Prove that two triangles formed by a pair of intersecting lines and a pair of parallel lines (an “X” trapped between two parallel lines) are similar.</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: transversal, interior, exterior, corresponding, alternate, vertical and vocabulary given at previous grades</li> </ul>	<p>McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 67-69, 70-73, 74, 75-77, 78-81, 84, 86, 90, 93, 94, 96, 98, 99, 106, 121-122, 123-125, 126-127, 128-131, 132-135, 136-139, 139-142, 145-146, 147-149, 159, 161-163, 164, 165, 168-169, 178, 181, 182-184, 190, 211, 220-221, 224, 225, 417-420, 420-423, 461, 464, 465</p>	
<p>Know and apply properties of equilateral, isosceles and scalene triangles to solve problems and logically justify results. (9.3.3.3)</p> <p>For example: Use the triangle inequality to prove that the perimeter of a quadrilateral is larger than the sum of the lengths of its diagonals.</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: equilateral, isosceles, scalene and vocabulary given at previous grades</li> </ul>	<p>McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 173, 175-177, 185-187, 188-190, 198, 205, 212-213, 214-216, 218, 219-221, 223, 224, 225, 315, 350, 371, 532, 541, 542-544, 545-546, 549, 555, 577, 580, 593, 681-682</p>	
<p>Apply the Pythagorean Theorem and its converse to solve problems and logically justify results. (9.3.3.4)</p> <p>For example: When building a wooden frame that is supposed to have a square corner, ensure that the corner is square by measuring lengths near the corner and applying the Pythagorean Theorem.</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: vocabulary given at previous grades</li> </ul>	<p>McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 191, 192-194, 195-198, 199, 200-202, 203-205, 218, 221-222, 224, 225, 239, 256, 436, 472, 491-492, 494, 495-496, 507, 512, 525, 529, 542, 547, 549, 570-571, 573-575, 579, 580, 581</p>	

\* McDougal Littell “Geometry Concepts and Skills” is used for the Geometry course.

# GEOMETRY CURRICULUM FRAMEWORKS

(Geometry 9, Geometry, Honors Geometry)

## GEOMETRY AND MEASUREMENT (encompasses 28-32% of MCA test items) (continued)

Curriculum Benchmark	MCA III Test Item Specifications	Where Benchmark is Taught/Assessed in “Geometry Concepts and Skills” Student Edition*	Notes
<p>Know and apply properties of right triangles, including properties of 45-45-90 and 30-60-90 triangles, to solve problems and logically justify results. (9.3.3.5)</p> <p>For example: Use 30-60-90 triangles to analyze geometric figures involving equilateral triangles and hexagons. Another example: Determine exact values of the trigonometric ratios in these special triangles using relationships among the side lengths.</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: vocabulary given at previous grades</li> </ul>	<p>McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 542-544, 545-547, 548, 549-551, 552-555, 568, 577-578, 580, 581, 651, 693, 698</p>	
<p>Know and apply properties of congruent and similar figures to solve problems and logically justify results. (9.3.3.6)</p> <p>For example: Analyze lengths and areas in a figure formed by drawing a line segment from one side of a triangle to a second side, parallel to the third side. Another example: Determine the height of a pine tree by comparing the length of its shadow to the length of the shadow of a person of known height. Another example: When attempting to build two identical 4-sided frames, a person measured the lengths of corresponding sides and found that they matched. Can the person conclude that the shapes of the frames are congruent?</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: vocabulary given at previous grades</li> </ul>	<p>McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 233-235, 236-239, 240, 241-244, 245-249, 250-253, 253-255, 257-259, 260-263, 264, 265-267, 268-271, 273, 279, 289, 291-294, 296, 297, 351, 356, 360, 362-363, 364, 365-368, 369-371, 372-374, 375-378, 379-381, 382-385, 386-389, 390-392, 394-395, 396-398, 399, 401-403, 404, 405</p>	
<p>Use properties of polygons—including quadrilaterals and regular polygons—to define them, classify them, solve problems and logically justify results. (9.3.3.7)</p> <p>For example: Recognize that a rectangle is a special case of a trapezoid. Another example: Give a concise and clear definition of a kite.</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: regular polygon, isosceles and vocabulary given at previous grades</li> </ul>	<p>McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 303-305, 306-308, 309, 310-312, 313-315, 316-319, 320-323, 324, 325-327, 328-330, 331, 332-333, 334-336, 337-338, 339-341, 342-345, 346, 347, 351, 352-353, 363, 378, 410, 411-412, 413-415, 416, 417-420, 420-423</p>	
<p>Know and apply properties of a circle to solve problems and logically justify results. (9.3.3.8)</p> <p>For example: Show that opposite angles of a quadrilateral inscribed in a circle are supplementary.</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: arc, central angle, inscribed, circumscribed, tangent, chord and vocabulary given at previous grades</li> </ul>	<p>McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 451, 452-455, 455-458, 459, 463, 464, 465, 589-590, 591-593, 594, 595-597, 598-600, 601-603, 604-607, 608-610, 610-612, 613, 614-616, 617-619, 620-622, 623-625, 626, 627-629, 629-632, 639, 641-645, 646, 647, 651, 695-696, 700</p>	

\* McDougal Littell “Geometry Concepts and Skills” is used for the Geometry course.

# GEOMETRY CURRICULUM FRAMEWORKS

(Geometry 9, Geometry, Honors Geometry)

## GEOMETRY AND MEASUREMENT (encompasses 28-32% of MCA test items) (continued)

**Standard 4:** Solve real-world and mathematical geometric problems using algebraic methods.

Curriculum Benchmark	MCA III Test Item Specifications	Where Benchmark is Taught/Assessed in “Geometry Concepts and Skills” Student Edition*	Notes
Understand how the properties of similar right triangles allow the trigonometric ratios to be defined, and determine the sine, cosine and tangent of an acute angle in a right triangle. (9.3.4.1)	<ul style="list-style-type: none"> <li>Items do not include context.</li> <li>Vocabulary allowed in items: trigonometric ratios, sine, cosine, tangent and vocabulary given at previous grades</li> </ul>	McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 556, 557-559, 560-562, 563-565, 566-568, 578-579, 580, 581, 693-694	
Apply the trigonometric ratios sine, cosine and tangent to solve problems, such as determining lengths and areas in right triangles and in figures that can be decomposed into right triangles. Know how to use calculators, tables or other technology to evaluate trigonometric ratios. (9.3.4.2)  For example: Find the area of a triangle, given the measure of one of its acute angles and the lengths of the two sides that form that angle.	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: trigonometric ratios, sine, cosine, tangent and vocabulary given at previous grades</li> </ul>	McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 558-560, 561-562, 565, 567-568, 569-572, 572-575, 579, 580, 581, 584-585, 607, 619, 651, 694	
Use calculators, tables or other technologies in connection with the trigonometric ratios to find angle measures in right triangles in various contexts. (9.3.4.3)	<ul style="list-style-type: none"> <li>Assessed within 9.3.4.1 and 9.3.4.2</li> </ul>	McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 569-571, 572-574, 575, 579, 580, 651, 694	
Use coordinate geometry to represent and analyze line segments and polygons, including determining lengths, midpoints and slopes of line segments. (9.3.4.4)	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: midpoint and vocabulary given at previous grades</li> </ul>	McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 55, 56-59, 73, 81, 87, 95, 98, 99, 150-151, 153-154, 155-159, 163, 164, 165, 169, 178, 193-194, 197, 198, 211, 221, 224, 280, 283, 286-287, 289, 297, 299, 322, 335, 341, 351, 665, 677, 680, 682, 684, 720	
Know the equation for the graph of a circle with radius $r$ and center $(h, k)$ , $(x - h)^2 + (y - k)^2 = r^2$ , and justify this equation using the Pythagorean Theorem and properties of translations. (9.3.4.5)	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: vocabulary given at previous grades</li> </ul>	McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 627-629, 629-632, 639, 645, 646, 647, 696, 700	

\* McDougal Littell “Geometry Concepts and Skills” is used for the Geometry course.

# GEOMETRY CURRICULUM FRAMEWORKS

(Geometry 9, Geometry, Honors Geometry)

## GEOMETRY AND MEASUREMENT (encompasses 28-32% of MCA test items) (continued)

Curriculum Benchmark	MCA III Test Item Specifications	Where Benchmark is Taught/Assessed in “Geometry Concepts and Skills” Student Edition*	Notes
<p>Use numeric, graphic and symbolic representations of transformations in two dimensions, such as reflections, translations, scale changes and rotations about the origin by multiples of <math>90^\circ</math>, to solve problems involving figures on a coordinate grid. (9.3.4.6)</p> <p>For example: If the point (3,-2) is rotated <math>90^\circ</math> counterclockwise about the origin, it becomes the point (2, 3).</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: pre-image, image, isometry and vocabulary given at previous grades</li> </ul>	<p>McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 153-154, 155-159, 169, 178, 283, 286-287, 289, 297, 399, 635, 637-638, 639, 645, 646, 651, 680, 684, 696</p>	
<p>Use algebra to solve geometric problems unrelated to coordinate geometry, such as solving for an unknown length in a figure involving similar triangles, or using the Pythagorean Theorem to obtain a quadratic equation for a length in a geometric figure. (9.3.4.7)</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: vocabulary given at previous grade</li> </ul>	<p>McDougal Littell “Geometry Concepts and Skills” 2005 SE pages: 77, 78, 80-81, 187, 188-189, 190, 192-193, 195-196, 198, 357-360, 361-363, 364, 365-368, 368-370, 374, 376-377, 378, 379-381, 382-385, 387-389, 390-392, 395, 400-403, 404, 405</p>	

\* McDougal Littell “Geometry Concepts and Skills” is used for the Geometry course.

# GEOMETRY CURRICULUM FRAMEWORKS

(Geometry 9, Geometry, Honors Geometry)

## DATA ANALYSIS AND PROBABILITY (encompasses 18-26% of MCA test items)

**Standard 1:** Display and analyze data, use various measures associated with data to draw conclusions, identify trends and describe relationships.

Curriculum Benchmark	MCA III Test Item Specifications	Where Benchmark is Taught/Assessed in "Geometry Concepts and Skills" Student Edition*	Notes
Describe a data set using data displays, including box-and-whisker plots; describe and compare data sets using summary statistics, including measures of center, location and spread. Measures of center and location include mean, median, quartile and percentile. Measures of spread include standard deviation, range and inter-quartile range. Know how to use calculators, spreadsheets or other technology to display data and calculate summary statistics. (9.4.1.1)	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: box-and-whisker plot, quartile, percentile, inter-quartile range, standard deviation, central tendency and vocabulary given at previous grades</li> </ul>		

\* McDougal Littell "Geometry Concepts and Skills" is used for the Geometry course.

# GEOMETRY CURRICULUM FRAMEWORKS

(Geometry 9, Geometry, Honors Geometry)

## DATA ANALYSIS AND PROBABILITY (encompasses 18-26% of MCA test items)

**Standard 2:** Explain the uses of data and statistical thinking to draw inferences, make predictions and justify conclusions.

Curriculum Benchmark	MCA III Test Item Specifications	Where Benchmark is Taught/Assessed in “Geometry Concepts and Skills” Student Edition*	Notes
<p>Evaluate reports based on data published in the media by identifying the source of the data, the design of the study, and the way the data are analyzed and displayed. Show how graphs and data can be distorted to support different points of view. Know how to use spreadsheet tables and graphs or graphing technology to recognize and analyze distortions in data displays. (9.4.2.1)</p> <p>For example: Displaying only part of a vertical axis can make differences in data appear deceptively large.</p>	<ul style="list-style-type: none"> <li>Not assessed on the MCA-III</li> </ul>		

\* McDougal Littell “Geometry Concepts and Skills” is used for the Geometry course.



# GEOMETRY CURRICULUM FRAMEWORKS

(Geometry 9, Geometry, Honors Geometry)

## DATA ANALYSIS AND PROBABILITY (encompasses 18-26% of MCA test items) (continued)

**Standard 3:** Calculate probabilities and apply probability concepts to solve real-world and mathematical problems.

Curriculum Benchmark	MCA III Test Item Specifications	Where Benchmark is Taught/Assessed in “Geometry Concepts and Skills” Student Edition*	Notes
<p>Select and apply counting procedures, such as the multiplication and addition principles and tree diagrams, to determine the size of a sample space (the number of possible outcomes) and to calculate probabilities. (9.4.3.1)</p> <p>For example: If one girl and one boy are picked at random from a class with 20 girls and 15 boys, there are <math>20 \times 15 = 300</math> different possibilities, so the probability that a particular girl is chosen together with a particular boy is <math>1/300</math>.</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: vocabulary given at previous grades</li> </ul>		
<p>Calculate experimental probabilities by performing simulations or experiments involving a probability model and using relative frequencies of outcomes. (9.4.3.2)</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: simulation and vocabulary given at previous grades</li> </ul>		
<p>Understand that the Law of Large Numbers expresses a relationship between the probabilities in a probability model and the experimental probabilities found by performing simulations or experiments involving the model. (9.4.3.3)</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: simulation and vocabulary given at previous grades</li> </ul>		
<p>Use random numbers generated by a calculator or a spreadsheet, or taken from a table, to perform probability simulations and to introduce fairness into decision making. (9.4.3.4)</p> <p>For example: If a group of students needs to fairly select one of its members to lead a discussion, they can use a random number to determine the selection.</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: simulation and vocabulary given at previous grades</li> </ul>		

\* McDougal Littell “Geometry Concepts and Skills” is used for the Geometry course.

# GEOMETRY CURRICULUM FRAMEWORKS

(Geometry 9, Geometry, Honors Geometry)

## DATA ANALYSIS AND PROBABILITY (encompasses 18-26% of MCA test items) (continued)

Curriculum Benchmark	MCA III Test Item Specifications	Where Benchmark is Taught/Assessed in “Geometry Concepts and Skills” Student Edition*	Notes
<p>Apply probability concepts such as intersections, unions and complements of events, and conditional probability and independence, to calculate probabilities and solve problems. (9.4.3.5)</p> <p>For example: The probability of tossing at least one head when flipping a fair coin three times can be calculated by looking at the complement of this event (flipping three tails in a row).</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: intersections, unions, complements of events, conditional and vocabulary given at previous grades</li> </ul>		
<p>Use the relationship between conditional probabilities and relative frequencies in contingency tables. (9.4.3.9)</p> <p>For example: A table that displays percentages relating gender (male or female) and handedness (right-handed or left-handed) can be used to determine the conditional probability of being left-handed, given that the gender is male.</p>	<ul style="list-style-type: none"> <li>Vocabulary allowed in items: conditional and vocabulary given at previous grades</li> </ul>		

\* McDougal Littell “Geometry Concepts and Skills” is used for the Geometry course.

# GEOMETRY CURRICULUM FRAMEWORKS

(Geometry 9, Geometry, Honors Geometry)

READING IN THE CONTENT AREA (Taken from “Standards for Literacy in Science and Technical Subjects”)				
Benchmark	Unit	Quarter	Activities	How Assessed
Cite specific textual evidence to support analysis of technical texts, attending to the precise details of explanations or descriptions. (9.13.1.1)	Probability and Statistics Unit	3	Complete a vocabulary organizer for all main concepts in the unit.	Completion check Quizzes/tests
Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. (9.13.2.2)	Deductive Reasoning	1	Read and comprehend the Law of Syllogism. Rewrite and write your own accurate statement using the law of Syllogism.	Small formative assessments Quizzes/tests
Follow precisely a complex multi-step procedure when carrying out experiments, designing solutions, taking measurements, or performing technical tasks, attending to special cases (constraints) or exceptions defined in the text. (9.13.3.3)	Chapter 5 Triangle Congruence Proofs	2	Read and comprehend and write two column proofs showing triangle congruence.	Small formative assessments Quizzes/tests
Determine the meaning of symbols, equations, graphical representations, tabular representations, key terms, and other domain-specific words and phrases as they are used in a specific technical context relevant to grades 9–10 texts and topics. (9.13.4.4)	All	All	Reading and interpreting the textbook and teacher notes.	Assignments Small formative assessments Quizzes/tests
Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy). (9.13.5.5)	All	All	Reading and interpreting the textbook and teacher notes.	Assignments Small formative assessments Quizzes/tests
Analyze the author’s purpose in describing phenomena, providing an explanation, describing a procedure, or discussing/reporting an experiment in a text, defining the question the author seeks to address. (9.13.6.6)				
Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. (9.13.7.7)	Probability and Statistics Unit	3	Creating and Interpreting: Bar graphs, line graphs, frequency tables, histograms, stem and leaf plots, box and whisker plots and circle graphs (pie charts)	Quizzes/tests
Assess the extent to which the reasoning and evidence in a text support the author’s claim or a recommendation for solving a technical problem. (9.13.8.8)				

# GEOMETRY CURRICULUM FRAMEWORKS

(Geometry 9, Geometry, Honors Geometry)

<b>READING IN THE CONTENT AREA (Taken from “Standards for Literacy in Science and Technical Subjects”)</b>				
<b>Benchmark</b>	<b>Unit</b>	<b>Quarter</b>	<b>Activities</b>	<b>How Assessed</b>
Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. (9.13.9.9)				
By the end of grade 10, read and comprehend technical texts in the grades 9–10 text complexity band independently and proficiently. (9.13.10.10)	All	All	Completing assignments from the book	Daily assignments Short formative assessments Weekly quizzes