

Integrated **2** Mathematics

correlated to the



**California Standards Map
for Mathematics—Geometry**

Publisher:	McDougal Littell
Program Title:	Integrated Mathematics Book 2
Components:	Pupil's Edition (PE), Teacher's Edition (TE)
Grade Level(s):	8-12
Intended Audience:	Integrated Mathematics Students

**Standards Map - Basic Comprehensive Program
Grades Eight Through Twelve - Mathematics**

The standards for grades eight through twelve are organized differently from those for kindergarten through grade seven. In this section strands are not used for organizational purposes as they are in the elementary grades because the mathematics studied in grades eight through twelve falls naturally under discipline headings: algebra, geometry, and so forth. Many schools teach this material in traditional courses; others teach it in an integrated fashion. To allow local educational agencies and teachers flexibility in teaching the material, the standards for grades eight through twelve do not mandate that a particular discipline be initiated and completed in a single grade. The core content of these subjects must be covered; students are expected to achieve the standards however these subjects are sequenced.

Grade	Standard #	Text of Standard	PUBLISHER CITATIONS*			FOR LEA USE ONLY		
			Introduced	Practiced	Taught to Mastery	Meets Standard		Local Education Agency Evaluator Notes
DISCIPLINE		Geometry				Y	N	
8-12	1.0	Students demonstrate understanding by identifying and giving examples of undefined terms, axioms, theorems, and inductive and deductive reasoning.	PE/TE: 31-34, 38-40, 45-47, 367- 368, 373-375, 380-382, 386- 389, 402, 408 411, 415-419, 431, 433-434, 439-442, 450, 452, 459, 466, 473-475, 482, 484, 669 672 ^{o,Δ}	PE/TE: 35-37, 41-44, 48-51, 53- 54 ^o , 369, 376- 377, 390-392, 412-414, 420- 422, 425 ^o , 443	PE/TE: 31-34, 38-40, 45-47, 367- 368, 373-375, 380-382, 386- 389, 402, 408 411, 415-419, 431, 433-434, 439-442, 450, 452, 459, 466, 473-475, 482, 484, 669 672 ^{o,Δ}			

* For more information, see Notes.
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			Introduced	Practiced	Taught to Mastery	Meets Standard		Local Education Agency Evaluator Notes
						Y	N	
8-12	2.0	Students write geometric proofs, including proofs by contradiction.	PE/TE: 408-411, 415-419, 432-434, 440-441, 451, 460-462, 467-468 ^Δ	PE/TE: 412-414, 420-422, 425 [®] , 436-438, 445-447, 453-454, 457 [®] , 463-464, 470-471, 477-478, 485, 487, 498 [®]	PE/TE: 408-411, 415-419, 432-434, 440-441, 451, 460-462, 467-468 ^Δ			
8-12	3.0	Students construct and judge the validity of a logical argument and give counterexamples to disprove a statement.	PE/TE: 31-34, 38-40, 45-47, 379-382, 389, 394-397, 401-403, 408-411, 415-419, 432-434, 440-441, 451, 460-462, 467-468 ^Δ	PE/TE: 35-37, 41-44, 48-51, 54 [®] , 383-385, 390-392, 398-400, 404-407, 412-414, 420-422, 425 [®] , 436-438, 445-447, 453-454, 457 [®] , 463-464, 470-471, 477-478, 485, 487, 498 [®]	PE/TE: 31-34, 38-40, 45-47, 379-382, 389, 394-397, 401-403, 408-411, 415-419, 432-434, 440-441, 451, 460-462, 467-468 ^Δ			
8-12	4.0	Students prove basic theorems involving congruence and similarity.	PE/TE: 409-410, 416-417, 419, 450-452, 459-462, 467-468, 473-475, 482 ^Δ	PE/TE: 412, 420-422, 425 [®] , 436, 453-454, 463-464, 470-471, 477-480, 498 [®]	PE/TE: 409-410, 416-417, 419, 450-452, 459-462, 467-468, 473-475, 482 ^Δ			

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8-12	5.0	Students prove that triangles are congruent or similar, and they are able to use the concept of corresponding parts of congruent triangles.	PE/TE: 449-452, 458-462, 466-468 ^Δ	PE/TE: 453-455, 457 [®] , 463-464, 469-471, 498 [®]	PE/TE: 449-452, 458-462, 466-468 ^Δ			
8-12	6.0	Students know and are able to use the triangle inequality theorem.	PE/TE: 473, 474, 489, 490 ^{§,Ω}	PE/TE: 470 [§]	PE/TE: 473, 474, 489, 490 ^{§,Ω}			
8-12	7.0	Students prove and use theorems involving the properties of parallel lines cut by a transversal, the properties of quadrilaterals, and the properties of circles.	PE/TE: 415-419, 431-434, 441-442 ^Δ	PE/TE: 420-422, 425 [®] , 435-438, 445, 457 [®]	PE/TE: 415-419, 431-434, 441-442 ^Δ			
8-12	8.0	Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.	PE/TE: 84-87 [†] , 658 [†] , 673 [†]	PE/TE: 44, 88-90, 98, 235, 332, 479, 496, 564, 658 [†] , 674	PE/TE: 84-87 [†] , 658 [†] , 673 [†]			
8-12	9.0	Students compute the volumes and surface areas of prisms, pyramids, cylinders, cones, and spheres; and students commit to memory the formulas for prisms, pyramids, and cylinders.	PE/TE: 84-87 [†] , 658 [†] , 673 [†]	PE/TE: 44, 82, 88-90, 98, 249, 496, 564, 658 [†] , 674	PE/TE: 84-87 [†] , 658 [†] , 673 [†]			
8-12	10.0	Students compute areas of polygons, including rectangles, scalene triangles, equilateral triangles, rhombi, parallelograms, and trapezoids.	PE/TE: 658 [†]	PE/TE: 235, 332, 479, 658 [†]	PE/TE: 658 [†]			
8-12	11.0	Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.	PE/TE:	PE/TE: 98, 104, 674	PE/TE:			

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8-12	12.0	Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.	PE/TE: 33, 439-443, 655 ^A	PE/TE: 36, 444-447	PE/TE: 33, 439-443, 655 ^A			
8-12	13.0	Students prove relationships between angles in polygons by using properties of complementary, supplementary, vertical, and exterior angles.	PE/TE: 418-419, 440-441 ^A	PE/TE: 445-447	PE/TE: 418-419, 440-441 ^A			
8-12	14.0	Students prove the Pythagorean theorem.	PE/TE: -	PE/TE: -	PE/TE: -			
8-12	15.0	Students use the Pythagorean theorem to determine distance and find missing lengths of sides of right triangles.	PE/TE: 252, 482, 661 ^A	PE/TE: 486	PE/TE: 252, 482, 661 ^A			
8-12	16.0	Students perform basic constructions with a straightedge and compass, such as angle bisectors, perpendicular bisectors, and the line parallel to a given line through a point off the line.	PE/TE: 475 ^A	PE/TE: 470, 479, 676	PE/TE: 475 ^A			
8-12	17.0	Students prove theorems by using coordinate geometry, including the midpoint of a line segment, the distance formula, and various forms of equations of lines and circles.	PE/TE: 252-254, 259-260, 281-283, 580, 585-587, 591-594 ^A	PE/TE: 255-258, 261-263, 284-286, 288 [®] , 590, 597-598, 600 [®]	PE/TE: 252-254, 259-260, 281-283, 580, 585-587, 591-594 ^A			
8-12	18.0	Students know the definitions of the basic trigonometric functions defined by the angles of a right triangle. They also know and are able to use elementary relationships between them. For example, $\tan(x) = \sin(x)/\cos(x)$, $(\sin(x))^2 + (\cos(x))^2 = 1$.	PE/TE: 491-492 [†] , 659-660 [†]	PE/TE: 495, 499 [®] , 659-660 [†]	PE/TE: 491-492 [†] , 659-660 [†]			

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8-12	19.0	Students use trigonometric functions to solve for an unknown length of a side of a right triangle, given an angle and a length of a side.	PE/TE: 492, 660 [†]	PE/TE: 495, 499 [®] , 660 [†]	PE/TE: 492, 660 [†]			
8-12	20.0	Students know and are able to use angle and side relationships in problems with special right triangles, such as 30°, 60°, and 90° triangles and 45°, 45°, and 90° triangles.	PE/TE: 491-492 [†]	PE/TE: 493-495, 499 [®]	PE/TE: 491-492 [†]			
8-12	21.0	Students prove and solve problems regarding relationships among chords, secants, tangents, inscribed angles, and inscribed and circumscribed polygons of circles.	PE/TE: 675 [†]	PE/TE: 676	PE/TE: 675 [†]			
8-12	22.0	Students know the effect of rigid motions on figures in the coordinate plane and space, including rotations, translations, and reflections.	PE/TE: 161-162 [†] , 266-268 [†] , 472 [†] , 662- 664 [†]	PE/TE: 163, 181 [®] , 270-273, 288 [®] , 662- 664 [†]	PE/TE: 161-162 [†] , 266-268 [†] , 472 [†] , 662- 664 [†]			

Publisher Notes/Additional Comments (note to publishers: please include grade level/standard when listing comments):

† indicated page(s) contain material appropriate for more than one category of instruction

^ topic is both introduced and taught to mastery on the pages listed

® indicated page(s) contain assessment items

∞ a full list of Postulates and Theorems of Algebra and Geometry can be found on pages 669-672

§ related topics are covered on the pages listed

² Standard 6.0: see also *Integrated Mathematics Book 3* , pages 9-10, 13, 62

- Standard 14.0: see *Integrated Mathematics Book 1* , page 477