

Geometry

<b>GEOMETRY</b>					
(revised 2008)	Levels: I - introduced; P - practiced; M - mastered		Current Text		
CONCEPT	SKILLS	LEVEL	Chapter	Teaching Notes	STATE GOALS
<b>I. Introduction to Geometry</b>					
			<b>1 &amp; 2</b>		
	1. points, lines, planes	P, M			9A4a
	2. basic geometry terms	P, M			9A4a
	3. symbols and notation for basic terms	P, M			9A4a
	4. segment properties	P, M			9A4a
	5. angles - classification, pair relationships	P, M			9A4a
	7. patterns/inductive reasoning	P			9C4a
	8. deductive reasoning	I, P			9C4a
	a. Conditional statements				
	b. Converse				
	c. Inverse				
	d. Contrapositive				
	9. simple proofs with segments or angles	I, P, M			9C4b
<b>II. Parallel and Perpendicular Lines</b>					
			<b>3</b>		
	1. transversals & names of angles formed	I, P, M			9B4
	2. relationship between angles when lines are parallel	I, P, M			9B4
	3. proving lines are parallel	I, P, M			9C4c
	4. slopes of parallel and perpendicular lines	P			9B4
<b>III. Triangles</b>					
			<b>4 &amp; 5</b>		
	1. classify triangles - by sides and angles	P			9B4
	2. triangle congruence proofs	I, P, M			9C4c
	a. SSS				
	b. SAS				
	c. ASA				
	d. AAS				
	e. HL				
	3. Use congruent triangles in proofs	I, P, M			9C4c
	4. isosceles triangle theorems	I, P, M			9B4
	5. Special segments in triangles - pts of concurrency	I, P, M		use sketchpad	9B4
	a. Perpendicular bisectors - circumcenter				
	b. Angle bisectors - incenter				
	c. Medians - centroid				
	d. Altitudes - orthocenter				
	e. Midsegment				

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	6. triangle inequalities - sides and angles	I, P, M			9B4
	7. indirect proof	I, P		may be omitted	9C4c
<b>IV. Quadrilaterals</b>			<b>6</b>		
	1. classifying polygons - convex, concave, types	P, M			9B4
	2. parallelogram properties	I, P, M			9B4
	3. proving quadrilaterals are parallelograms	I, P, M			9C4c
	4. other quadrilaterals and their properties	I, P, M			9B4
	a. Rhombus				
	b. Rectangle				
	c. Square				
	d. Trapezoid (isosceles trapezoid)				
	e. Kite				
	5. Area of triangles and quadrilaterals	P, M			9B4, 7A4b
<b>V. Similarity</b>			<b>8</b>		
	1. ratio and proportions	P, M			6D, 7C4a
	2. recognize similar shapes and polygons	P, M			9B4
	3. use similar figures to find measures indirectly	I, P, M			6D, 7C4a
	4. prove triangles similar using SSS~ & AA~	I, P, M			9C4c
	5. investigate ratios of perimeter and area	I, P			6D, 7C4a, 7B5
<b>VI. Right Triangles</b>					
	1. altitude to the hypotenuse theorems - similar right triangles	I, P, M			9B4, 6D
	2. pythagorean theorem & triples	P, M			7A4b, 6D
	3. special right triangles	I, P, M			9B4
	a. 30-60-90				
	b. 45-45-90				
	4. trigonometric ratios - sine, cosine, tangent	I, P			9D4,
	5. solve right triangles	I, P			9B4, 9D4
<b>VII. Circles</b>			<b>10</b>		
	1. circle vocabulary	P, M			9B4
	2. tangent line theorems	I, P, M			9B4
	3. arcs and chord theorems	I, P, M			9B4
	4. segment length theorems	I, P, M			9B4
	5. angles in circles and their measures	I, P, M			9B4
	6. equation of a circle (standard form)	I, P, M		usually not time for this	
	7. circumference and arc length	P, M	11		9B4, 7A4b
	8. area of circles and sectors	P, M	11		9B4, 7A4b

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<b>VIII. Area of Plane Figures</b>					
	1. regular polygons	I, P, M	11		9B4
	a. Sum of interior angles & each for reg. poly.				9B4
	b. Sum of exterior angles & each for reg. poly.				9B4
	c. Area of reg. poly.				9B4, 7A4b
	2. triangles	P, M	6		9B4, 7A4b
	3. quadrilaterals	P, M	6		9B4, 7A4b
	4. circles	P, M	11		9B4, 7A4b
<b>IX. Surface Area and Volume of Solids</b>					
	1. solid vocabulary - face, edge, slant height, etc.	P, M			9B4
	2. Prisms & Cylinders	I, P, M			
	a. Lateral area				9B4, 7A4b
	b. Surface area				9B4, 7A4b
	c. Volume				9B4, 7A4b
	3. Pyramids & Cones	I, P, M			
	a. Lateral area				9B4, 7A4b
	b. Surface area				9B4, 7A4b
	c. Volume				9B4, 7A4b
	4. Sphere - surface area, volume	I, P, M			9B4, 7A4b
<b>X. Transformations</b>					
	1. transformation vocabulary	P	7	<b>typically not time</b>	
	2. translations & vectors	I, P		may use sketchpad	
	3. reflections	I, P			
	4. rotations	I, P			
	5. glide reflections and other compositions	I, P			
Current Text:					
Geometry					
McDougal Littell					
pub. 2004					