

Pacing Guide for Geometry
2009-2010

Dates	Objectives/Topics	Textbook Support	Other Resources	Special Notes
Week 1	Points, lines, planes, segments Distance and midpoint formulas	1.1 - 1.3	Rulers	
Week 2	Angle measures and relationships	1.4 - 1.5	Protractors	Omit 1.6
Week 3	Inductive and Deductive reasoning, algebraic proofs	2.1, 2.3 - 2.6		Omit 2.2, In 2.4, teach definition of deductive reasoning only
Week 4	Proving segment and angle relationships	2.7 – 2.8		Demonstrate how to do a geometric proof; students will not be required to do one on their own
Week 5	Parallel lines, angles formed by transversals, slopes of lines	3.1 - 3.3	Graph Paper, Rulers, Protractors	Omit 3.4 and 3.6
Week 6A	Proving lines parallel	3.5		Formal proof optional
Week 6B	Classifying triangles, Triangle Sum Theorem, Congruent Triangles	4.1 – 4.3	Rulers, Protractors	Quilt square activity
Week 7	Proving Triangles Congruent, Isosceles Triangles	4.4 - 4.6		Omit 4.7
Week 8	Relationships in Triangles	5.1, 5.2, 5.4	Construction paper, scissors, rulers	Use the centroid to balance a triangle on a pencil point
Week 9A	Proportions and Similar Polygons	6.1 – 6.2		Omit 6.3 – 6.6
Week 9B	Review and Nine Weeks Test			Test is optional
	End of First Nine Weeks			
Week 10	Pythagorean Theorem, Special Right Triangles	7.2 – 7.3	Rulers, protractors	Omit 7.1 Modeling the Pythag. Th. activity
Week 11A	Trigonometry	7.4 – 7.5		Omit 7.6, 7.7
Week 11B	Polygons, Angles of Polygons	1.6, 8.1		
Week 12	Parallelograms, Trapezoids	8.2 – 8.6		“Parallelogramville Story” Omit 8.7
<i>Optional</i>	<i>Transformations, vectors</i>	<i>9.1 -9.6</i>		<i>Required in new standards</i>
Week 13	Circles, Arcs, Chords, Central and Inscribed Angles	10.1 – 10.4	Compass	
Week 14	Tangents, Secants, Special Segments, Equation of a circle	10.5 – 10.8	Compass	

Week 15	Areas of Polygons and Circles	11.1 – 11.3		Omit 11.1 – 11.5
Week 16	Surface Areas of 3 Dimensional Figures	12.3 – 12.7	Models of 3-dimensional objects	Omit 12.1 – 12.2
Week 17	Volumes of 3 Dimensional Figures	13.1 – 13.3	Models of 3-dimensional objects	Omit 13.4 – 13.5
Week 18	Review and Final Exam			Exam is required
	End of Semester			

The above pacing guide addresses all of the **“Checks for Understanding”** standards with the exception of the following:

3108.1.2 Determine position using spatial sense with two and three-dimensional coordinate systems.

3108.1.11 Identify and sketch solids formed by revolving two-dimensional figures around lines.

3108.2.3 Recognize and apply real number properties to **vector operations** and geometric proofs (e.g. reflexive, symmetric, transitive, addition, subtraction, multiplication, division, distributive, and substitution properties).

3108.2.4 Add vectors graphically and algebraically.

3108.2.5 Multiply a vector by a scalar graphically and algebraically.

3108.3.5 Use mapping notation to identify the image of a transformation given the coordinates of the pre-image.

3108.3.6 Identify a transformation given its mapping notation.

3108.4.13 Locate, describe, and draw a locus in a plane or space (e.g., fixed distance from a point on a plane, fixed distance from a point in space, fixed distance from a line, equidistant from two points, equidistant from two parallel lines, and equidistant from two intersecting lines).

3108.4.16 Analyze and create truth tables to evaluate conjunctions, disjunctions, conditionals, inverses, contra-positives, and bi-conditionals.

3108.4.17 Use the Law of Detachment, Law of Syllogism, conditional statements, and bi-conditional statements to draw conclusions.

3108.4.19 Use coordinate geometry to prove properties of plane figures.

3108.4.23 Describe the polyhedron or solid that can be made from a given net including the Platonic Solids.

3108.4.24 Develop and use special formulas relating to polyhedra (e.g., Euler's Formula).

3108.4.26 Describe and draw cross-sections (including the conic sections) of prisms, cylinders, pyramids, spheres, and cones.

3108.4.31 Use properties of single transformations and compositions of transformations to determine their effect on geometric figures (e.g. reflections across lines of symmetry, rotations, translations, glide reflections, and dilations).

3108.4.32 Recognize, identify and apply types of symmetries (point, line, rotational) of two- and three-dimensional figures.

3108.4.33 Use transformations to create and analyze tessellations and investigate the use of tessellations in architecture, mosaics, and artwork.

3108.4.34 Create and analyze geometric designs using rigid motions (compositions of reflections, translations, and rotations).

3108.4.36 Use several methods, including AA, SSS, and SAS, to prove that two triangles are similar.

3108.4.42 Use geometric mean to solve problems involving relationships that exist when the altitude is drawn to the hypotenuse of a right triangle

3108.4.49 Use the Law of Sines (excluding the ambiguous case) and the Law of Cosines to find missing side lengths and/or angle measures in non-right triangles.

3108.5.2 Translate from one representation of data to another (e.g., bar graph to pie graph, pie graph to bar graph, table to pie graph, pie graph to chart) accurately using the area of a sector.

The **State Performance Indicators** that are *not* addressed in the pacing guide are as follows:

SPI 3108.2.2 Perform operations on vectors in various representations.

SPI 3108.3.2 Use coordinate geometry to prove characteristics of polygonal figures.

SPI 3108.3.3 Describe algebraically the effect of a single transformation (reflections in the x- or y-axis, rotations, translations, and dilations) on two-dimensional geometric shapes in the coordinate plane.

SPI 3108.4.10 Identify, describe, and/or apply transformations on two and three dimensional geometric shapes.

SPI 3108.5.1 Use area to solve problems involving geometric probability (e.g. dartboard problem, shaded sector of a circle, shaded region of a geometric figure).

