



Geometry

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STANDARDS	PAGE REFERENCES
GEOMETRY PERFORMANCE STANDARDS	
G: 1 Number Sense	
.1 Validate numerical solutions for application problems.	<p>Student Edition: 111-117, 123 #21, 135 #31, 137 #13</p> <p>Teacher Wraparound Edition: AE 112, 113</p>
.2 Describe the number "Pi" and its relationship to a circle.	<p>Student Edition: 556 <i>Geometry Lab</i> 556 <i>Reading Math</i> 51</p> <p>Teacher Wraparound Edition: GL 556</p>
.3 Determine the circumference and area of circles and the surface area and volume of cylinders and spheres.	<p>Student Edition: 51 ex 2, 54 #4, 55 #13, 56 #33-#34, 57 #55, 651 ex 2, 652 ex 3, 653 #3, 654 #21, 655 #37, 657 #16, 663 #36, 673 #19</p> <p>Teacher Wraparound Edition: AE 51, 651, 652; GL 651; PA 652</p>
.4 Sketch diagrams that represent given information about measures of segments and angles.	<p>Student Edition: 7 ex 3, 19 #52-#53 <i>Construction</i> 16</p> <p>Teacher Wraparound Edition: A 20; AE 8</p>

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.5 Explain restrictions on variables representing angles and lengths.	This objective can be met through classroom discussion.
G:2 Computation	
.1 Simplify expressions involving radicals and exponents.	Student Edition: 13-20, 21-27, 778-779, 790-791, 798-799 Teacher Wraparound Edition: AE 22, 23; I 23; PA 23
.2 Simplify complex fractions.	See Glencoe's <i>Algebra 1</i> © 2008. Student Edition: 621- 625 (Lesson 11-8)
.3 Evaluate formulas relevant to geometry including distance, midpoint, area, perimeter, volume, Pythagorean theorem, and quadratic formula.	Student Edition: 21-29, 38 #49-#51, 39 #7-#11, 47 #44-#49, 53 ex 4, 70 #15-#18, 73 #17-#18, 75 #7, 171, 182 ex 2, 204 ex 4, 252 ex 3, 364 ex 3, 727 #12-#13 Teacher Wraparound Edition: A 29; AE 23, 24, 53, 204, 227, 252; DI 24; GA 22; I 23; T 171
.4 Set up and solve proportions involving similar figures.	Student Edition: 397-403, 404 #15-#16, 414 #56-#58, 422 #39-#40, 423 #5, 425 ex 2, 426 #15, 428 #2 Teacher Wraparound Edition: A 403; AE 398, 399; DI 399; F 398; GL 398; PA 403
.5 Compute measures of unknown parts of a right triangle using the sine, cosine, and tangent ratios	Student Edition: 440-446, 454 #42-#47, 462 #62-#63, 463 #4, 487 #15-#17, 491 #7-#8, 492 #3, 493 #8 <i>Geometry Lab</i> 439 Teacher Wraparound Edition: A 439, 446; AE 441, 442, 443; PA 443; T 439
G:3 Measurement	
.1 Model and measure basic geometric figures using a variety of methods including paper folding, compass, straight edge, protractor, and technology.	Student Edition: 13-20, 29 #64-#65, 31-38, 39 #15-#20 Teacher Wraparound Edition: AE 14, 32; DI 15; PA 14
.2 Use compass and straight edge for basic constructions.	Student Edition: <i>Construction</i> 16, 25, 33, 35, 172, 182, 186, 266, 268, 409, 413

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<p>.3 Use appropriate units to label solutions of application problems.</p>	<p>This objective is used throughout the text, key examples are referenced below.</p> <p>Student Edition: 634 #7-#12, 639 ex 1, 643 #1-#3, 644 #28-#29, 646 #51-#53, 653 #12-#20, 654 #23, 656 #55-#57, 657 #7-#8, 730 ex 3, 731 ex 4, 732 #5-#10, 739 ex 3</p> <p>Teacher Wraparound Edition: AE 639, 652, 730, 731, 739</p>
<p>G:4 Theory</p>	
<p>.1 Communicate both orally and in writing, using correct geometric vocabulary and notation.</p>	<p>Student Edition: 56 #50, 82 #39, 146 #50, 161 #43, 216 #37, 231 #38, 286 #47, 339 #36, 346 #43, 385 #42, 395 #48, 403 #29, 437 #45, 476 #34, 508 #36, 531 #46, 577 #48, 612 #29, 646 #57</p>
<p>.2 Explain the difference among definitions, postulates/axioms, and theorems.</p>	<p>Student Edition: 105, 106, 109 #25</p> <p>Teacher Wraparound Edition: F 107; TNT 106</p>
<p>.3 Explain the importance of the Parallel Postulate in Euclidean geometry.</p>	<p>Student Edition: 173 <i>Geometry Lab</i> 188-189</p> <p>Teacher Wraparound Edition: A 189; T 188</p>
<p>.4 Classify problems as classical Euclidean geometry, coordinate geometry, or transformational geometry.</p>	<p>Student Edition: 173 <i>Geometry Lab</i> 188-189</p> <p>Teacher Wraparound Edition: A 189; T 188</p>
<p>.5 Explain the difference between inductive and deductive reasoning.</p>	<p>Student Edition: 78-82, 90 #56-#61, 105-109, 117 #36-#37, 118-123, 133 #11-#13</p> <p>Teacher Wraparound Edition: A 82, 104, 109; AE 79, 80, 100, 101, 106, 107, 119, 120, 125, 127; DI 119</p>
<p>G:5 Deduction</p>	
<p>.1 State the converse, inverse and contrapositive of a conditional statement and determine the validity of each.</p>	<p>Student Edition: 91-97, 104 #36-#38, 109 #31, 110 #8, 134 #17-#22, 137 #7 <i>Reading Math</i> 98</p> <p>Teacher Wraparound Edition:</p>

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.2 Rewrite an "if and only if" statement into two conditional statements and vice versa.	Student Edition: <i>Reading Math</i> 98 <i>Study Tip</i> 158 Teacher Wraparound Edition: A 98; T 98
.3 Prove conjectures related to geometric figures using paragraph proofs, indirect proofs, two-column proofs, and coordinate geometry proofs.	Student Edition: 78-82, 90 #56-#61, 105-109, 117 #36-#37, 118-123, 133 #11-#13 Teacher Wraparound Edition: A 82, 104, 109; AE 79, 80, 100, 101, 106, 107, 119, 120, 125, 127; DI 119
.4 Prove triangles are congruent using SSS, SAS, ASA, AAS, and HL.	Student Edition: 225-232, 233 #20, 234-241, 250 #39-#42, 255 #38, 258 #19-#22, 259 #23-#25 <i>Geometry Lab</i> 242-243 Teacher Wraparound Edition: A 447, 454; AE 449, 450; DI 449; F 450; I 450; PA 454
.5 Use definitions of terms related to triangles (i.e. altitude, median, angle bisector, isosceles, etc.) to deduce other properties of triangles.	Student Edition: 269-278, 287 #53-#54, 293 #38, 294 #3, 301 #43, 309 #35, 311 #9-#11, 313 #3, 315 #8 <i>Geometry Lab</i> 266-268 <i>Reading Math</i> 279 Teacher Wraparound Edition: DI 270, 271; RWC 272; TNT 271
.6 Develop and explain the properties of trapezoids, parallelograms, rectangles, rhombuses, kites, and squares using the definitions of the various quadrilaterals.	Student Edition: 339 #36, 346 #43, 351, 352 #6-#7, 353 #27, 354 #39, 371 #23, 373 #14-#15, 374 #1, 375 #11 <i>Geometry Lab</i> 333 <i>Reading Math</i> 331 Teacher Wraparound Edition: A 331, 354; F 331; PA 255; T 331
.7 Prove two triangles are similar and write a valid proportion showing the relationship between the corresponding sides.	Student Edition: 397-403, 404 #15-#16, 414 #56-#58, 422 #39-#40, 423 #5, 425 ex 2, 426 #15, 428 #2 Teacher Wraparound Edition: A 403; AE 398, 399; DI 399; F 398; GL 398; PA 403

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.8 Prove conjectures related to angles, parallel lines, and planes.	<p>Student Edition: 78-82, 90 #56-#61, 105-109, 117 #36-#37, 118-123, 133 #11-#13</p> <p>Teacher Wraparound Edition: A 82, 104, 109; AE 79, 80, 100, 101, 106, 107, 119, 120, 125, 127; DI 119</p>
G:6 Diagrams and Models	
.1 Select appropriate theorems to prove or disprove conjectures related to geometric figures.	<p>Student Edition: 78-82, 90 #56-#61, 105-109, 117 #36-#37, 118-123, 133 #11-#13</p> <p>Teacher Wraparound Edition: A 82, 104, 109; AE 79, 80, 100, 101, 106, 107, 119, 120, 125, 127; DI 119</p>
.2 Identify, classify, and draw two-dimensional and three-dimensional figures.	<p>Student Edition: 680-685, 686, 693, 697 #37-#38, 698 #1, 700, 706 <i>Geometry Lab</i> 67</p> <p>Teacher Wraparound Edition: A 67; AE 681; PA 682; T 693, 700; TNT 622</p>
.3 Draw and label triangles illustrating the congruency relationships of SSS, SAS, ASA, AAS, and HL.	<p>Student Edition: 78-82, 90 #56-#61, 105-109, 117 #36-#37, 118-123, 133 #11-#13</p> <p>Teacher Wraparound Edition: A 82, 104, 109; AE 79, 80, 100, 101, 106, 107, 119, 120, 125, 127; DI 119</p>
.4 Identify and label corresponding parts of overlapping triangles.	<p>Student Edition: 236 ex 2, 238 #2, 239 #7-#8, 240 #17, 241 #27, 245 ex 2, 247 ex 3, 248 #3-#4, 249 #20-#21, 259 #23, 261 #7, 262 #3, 263 #12</p> <p>Teacher Wraparound Edition: AE 236, 246, 247</p>
.5 Identify and label congruent non-coplanar triangles in a three-dimensional diagram.	This objective can be met through classroom discussions and activities.
.6 Draw and label similar figures showing the correct relationship between corresponding parts.	<p>Student Edition: 397-403, 404 #15-#16, 414 #56-#58, 422 #39-#40, 423 #5, 425 ex 2, 426 #15, 428 #2</p> <p>Teacher Wraparound Edition: A 403; AE 398, 399; DI 399; F 398; GL 398; PA 403</p>

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.7 Solve problems involving triangles, quadrilaterals, and other polygons using appropriate terminology and properties.	Student Edition: 339 #36, 346 #43, 351, 352 #6-#7, 353 #27, 354 #39, 371 #23, 373 #14-#15, 374 #1, 375 #11 <i>Geometry Lab</i> 333 <i>Reading Math</i> 331 Teacher Wraparound Edition: A 331, 354; F 331; PA 255; T 331
.8 Identify and label angles, segments, and lines as they relate to circles, and use the properties to solve problems.	Student Edition: 563-569, 570-577, 578-586, 587 #12-#13, 596 #39, 599-606 Teacher Wraparound Edition: A 569, 577; AE 564, 565, 566, 571, 572, 579, 581, 582; DI 565; F 564; PA 586; TNT 566
.9 Explain the difference among alternate interior angles, alternate exterior angles, corresponding angles, supplementary angles, and vertical angles formed by two lines and a transversal.	Student Edition: 40-47, 57 #57-#58, 66 #40-#41, 71 #27-#29 Teacher Wraparound Edition: A 47; AE 41, 42, 43, 44; DI 43; GL 41; PA 42
.10 Model and explain parallel, perpendicular, skew, and oblique lines.	Student Edition: 142-147, 149-154, 163 #52-#56, 164 #2-#4, 170 #49-#54, 179 #47-#48, 187 #36-#37, 192 #9-#15, 195 #16-#22, 196 #4 <i>Geometry Lab</i> 171 <i>Geometry Software Lab</i> 148 Teacher Wraparound Edition: A 147, 154, 163, 167, 175; AE 143, 144, 150, 151; DI 150; F 150; T 180; TNT 144
.11 Describe the relationships of planes in space.	Student Edition: 8 ex 4, 9 #9, 10 #27, 143 ex 1, 144 #1-#3, 145 #38, 146 #47 <i>Geometry Lab</i> 8, 142 <i>Reading Math</i> 12 Teacher Wraparound Edition: A 11; AE 8, 143; GL 8
.12 Find interior and exterior angle measures of regular polygons.	Student Edition: 318-323, 330 #46-#49, 339 #45-#48, 347 #1-#5, 370 #11, 373 #1-#3 <i>Spreadsheet Lab</i> 324 Teacher Wraparound Edition: A 323, 324; AE 319, 320, 321; F 320; PA 320

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.13 Confirm the validity of conjectures or provide a counter example using appropriate technology.	Student Edition: 78-82, 90 #56-#61, 105-109, 117 #36-#37, 118-123, 133 #11-#13 Teacher Wraparound Edition: A 82, 104, 109; AE 79, 80, 100, 101, 106, 107, 119, 120, 125, 127; DI 119
G:7 Probability	
.1 Construct a sample space and list all possible outcomes of a particular event.	Student Edition: 300 #29
.2 Use probability to solve problems presented as geometric models.	Student Edition: 665-671, 674 #23-#25, 675 #11-#13, 685 #45-#48, 691 #44 Teacher Wraparound Edition: A 671; AE 666, 667; I 667; PA 671
G:8 Patterns	
.1 Solve problems using the inequality relationships between the sides and angles of a triangle.	Student Edition: 280-287, 290, 294 #12, 296-301, 309 #32-#34, 311 #12-#16, 312 #18-#22 <i>Geometry Lab</i> 295 Teacher Wraparound Edition: A 287, 293, 295; AE 281, 283, 284, 290, 297, 298; DI 297; F 282; GL 282; PA 283, 298; T 295
.2 Identify and use patterns from right triangles, including 30° - 60° - 90° , 45° - 45° - 90° , and Pythagorean triples to solve application problems.	Student Edition: 458 ex 3, 460 #9, 461 #25, 463 #4, 464-470, 474 ex 3, 475 #5, 476 #27, 477 #40-#41, 481 ex 4, 482 #7, 483 #23, 487 #17, 488 #22, 489 #30 <i>Graphing Calculator Lab</i> 455 Teacher Wraparound Edition: A 470; AE 458, 465, 474, 481; PA 465
.3 Identify and describe patterns that emerge from two-dimensional and three-dimensional geometric figures and use the patterns to solve problems.	Student Edition: 318-323, 330 #46-#49, 339 #45-#48, 347 #1-#5, 370 #11, 373 #1-#3 <i>Spreadsheet Lab</i> 324 Teacher Wraparound Edition: A 323, 324; AE 319, 320, 321; F 320; PA 320
.4 Identify, explain, and transform geometric figures using reflections, rotations, and translations on geometric figures.	Student Edition: 497-503, 504-509, 510-517, 518 #10, 524 #38-#41, 525-532, 544 #11-#13, 546 #31-#32, 547 #7-#9, 548 #2, 549 #7 <i>Geometry Lab</i> 496 Teacher Wraparound Edition:

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G:9 Algebra	
.1 Write and solve equations that model geometric relationships.	Student Edition: 273 ex 2, 274 #3, 275 #16-#18, 783-784, 788-789 Teacher Wraparound Edition: AE 273
.2 Simplify and solve equations that result from formulas.	Student Edition: 273 ex 2, 274 #3, 275 #16-#18, 783-784, 788-789 Teacher Wraparound Edition: AE 273
.3 Solve application problems using the appropriate formula or relationships.	Student Edition: 273 ex 2, 274 #3, 275 #16-#18, 783-784, 788-789 Teacher Wraparound Edition: AE 273