



# Geometry

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STANDARDS	PAGE REFERENCES
<p><b>Standards 4.6 – 4.15</b></p>	
<p>All students will develop an understanding of algebraic concepts and processes and will use them to represent and analyze relationships among variable quantities and to solve problems.</p>	
<p><b>MODE:</b> Through the investigation of meaningful problems, individually or in cooperative groups while using decision making, risk taking, perseverance, appropriate assessment and technology the student will:</p>	
<ul style="list-style-type: none"> <li>recognize and understand undefined terms in geometry.</li> </ul>	<p><b>Student Edition:</b> 6-11, 20 #62-#65, 29 #66-#71, 39 #1-#2, 69 #6-#8, 73 #1-#3, 74 #1 <i>Geometry Lab 8</i> <i>Reading Math 12</i></p> <p><b>Teacher Wraparound Edition:</b> A 11, 20; AE 7, 8; DI 11; F 7; PA 7, T 6</p>
<ul style="list-style-type: none"> <li>identify and write good definitions.</li> </ul>	<p><b>Student Edition:</b> 6-11, 20 #62-#65, 29 #66-#71, 39 #1-#2, 69 #6-#8, 73 #1-#3, 74 #1 <i>Geometry Lab 8</i> <i>Reading Math 12</i></p> <p><b>Teacher Wraparound Edition:</b> A 11, 20; AE 7, 8; DI 11; F 7; PA 7, T 6</p>
<ul style="list-style-type: none"> <li>use protractors and rulers to find the measures of angles and segments.</li> </ul>	<p><b>Student Edition:</b> 13-20, 29 #64-#65, 31-38, 39 #15-#20</p> <p><b>Teacher Wraparound Edition:</b> AE 14, 32; DE 15; PA 14</p>

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<ul style="list-style-type: none"> <li>define and apply properties associated with angle bisectors, vertical angles and perpendicular lines.</li> </ul>	<p><b>Student Edition:</b> 40-47, 57 #57-#58, 66 #40-#41, 71 #27-#29</p> <p><b>Teacher Wraparound Edition:</b> A 47; AE 41, 42, 43, 44; DI 43; GL 41; PA 42</p>
<ul style="list-style-type: none"> <li>recognize how a compass and a straight edge are used in construction.</li> </ul>	<p>Student Edition: <i>Construction</i> 16, 25, 33, 35, 172, 182, 186, 266, 268, 409, 413</p>
<ul style="list-style-type: none"> <li>find the distance between the endpoints of a line segment on a number line.</li> </ul>	<p><b>Student Edition:</b> 21-29, 38 #49-#31, 39 #7-#11, 47 #44-#49, 70 #15-#18, 73 #8-#10, 75 #7, 179 #50-#52</p> <p><i>Geometry Lab</i> 30</p> <p><b>Teacher Wraparound Edition:</b> A 29; AE 22</p>
<ul style="list-style-type: none"> <li>find the slope of a line.</li> </ul>	<p><b>Student Edition:</b> 156-163, 164 #16-#18, 179 #43-#46</p> <p><i>Graphing Calculator Lab</i> 155</p> <p><b>Teacher Wraparound Edition:</b> A 155; AE 157, 158, 159; GL 158; T 155I TNT 157</p>
<ul style="list-style-type: none"> <li>state and apply properties of parallel lines.</li> </ul>	<p><b>Student Edition:</b> 142-147, 149-154, 163 #51-#56, 164 #2-#4, 170 #49-#54, 179 #47-#48, 187 #36-#37, 192 #9-#15, 195 #16-#22, 196 #4</p> <p><i>Geometry Software Lab</i> 148</p> <p><b>Teacher Wraparound Edition:</b> A 147, 154; AE 143, 144, 150, 151; DI 150; F 150; TNT 144</p>
<ul style="list-style-type: none"> <li>use slopes to determine if two lines are parallel or perpendicular.</li> </ul>	<p><b>Student Edition:</b> 160 #13-#16, 161 #23-#28, 162 #49, 164 #13, 167 ex 4, 168 #9-#10, 176 #7, 177 #18-#19, 179 #47-#48</p> <p><i>Geometry Lab</i> 171</p> <p><b>Teacher Wraparound Edition:</b> A 163, 167, 175; T 180</p>
<ul style="list-style-type: none"> <li>find the midpoint of a line segment in the coordinate plane.</li> </ul>	<p><b>Student Edition:</b> 23 ex 3, 24 ex 5, 25 #5-#6, 26 #7-#8, 27 #35-#42, 28 #56, 38 #49-#51, 39 #7-#11, 70 #19-#20, 73 #8-#10, 74 #3</p> <p><b>AE 23, 24; F 24; I 23; PA 23</b></p> <p><b>Teacher Wraparound Edition:</b> AE 23, 24; F 24; I 23; PA 23</p>

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<ul style="list-style-type: none"> <li>find the distance between two points in the coordinate plane.</li> </ul>	<p><b>Student Edition:</b> 21-29, 38 #49-#31, 39 #7-#11, 47 #44-#49, 70 #15-#18, 73 #8-#10, 75 #7, 179 #50-#52 <i>Geometry Lab</i> 30</p> <p><b>Teacher Wraparound Edition:</b> A 29; AE 22</p>
<ul style="list-style-type: none"> <li>write and interpret conditional and biconditional statements.</li> </ul>	<p><b>Student Edition:</b> 91-97, 104 #36-#38, 109 #31, 110 #8, 117 #38, 134 #17-#22, 137 #19-#20, 138 #5 <i>Reading Math</i> 98</p> <p><b>Teacher Wraparound Edition:</b> A 97, 98; AE 92, 93; F 94; PA 97; T 98; TNT 92, 93</p>
<ul style="list-style-type: none"> <li>identify polygons.</li> </ul>	<p><b>Student Edition:</b> 49-57, 71 #30-#31</p> <p><b>Teacher Wraparound Edition:</b> A 57; AE 50</p>
<ul style="list-style-type: none"> <li>identify parts of a triangle including altitudes and medians.</li> </ul>	<p><b>Student Edition:</b> 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</p> <p><b>Teacher Wraparound Edition:</b> DI 270, 271; RWC 272; TNT 271</p>
<ul style="list-style-type: none"> <li>identify and use theorems associated with isosceles triangles.</li> </ul>	<p><b>Student Edition:</b> 244-250, 251 ex 1, 252 ex 2, 253 ex 4, 254 #19-#20, 255 #34, 259 #26-#29, 261 #13-#14, 309 #36, 315 #13</p> <p><b>Teacher Wraparound Edition:</b> AE 245, 246, 247, 252; DI 246; GL 245; PA 247; TNT 246</p>
<ul style="list-style-type: none"> <li>find measures of interior angles and exterior angles of triangles and other polygons.</li> </ul>	<p><b>Student Edition:</b> 318-323, 330 #46-#49, 339 #45-#48, 347 #1-#5, 370 #11, 373 #1-#3 <i>Spreadsheet Lab</i> 324</p> <p><b>Teacher Wraparound Edition:</b> A 323, 324; AE 319, 320, 321; F 320; PA 320</p>

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<ul style="list-style-type: none"> <li>state and apply the triangle inequality theorem.</li> </ul>	<p><b>Student Edition:</b> 280-287, 290, 294 #10, 296-301, 309 #32-#34, 312 #18-#22 <i>Graphing Calculator Lab</i> 295</p> <p><b>Teacher Wraparound Edition:</b> A 287, 293, 295; AE 281, 283, 284, 290, 297, 298; DI 281, 297; F 282; PA 283, 298; T 295; TNT 297</p>
<ul style="list-style-type: none"> <li>recognize congruent figures.</li> </ul>	<p><b>Student Edition:</b> 217-223, 225-232, 233 #14-#15, 234-241 <i>Geometry Lab</i> 242</p> <p><b>Teacher Wraparound Edition:</b> A 223, 232, 241; AE 218, 219, 226, 227, 228, 229, 235, 236, 237; DI 218  F 238; PA 219, 232; TNT 219</p>
<ul style="list-style-type: none"> <li>create a scale drawing to specified degree of precision, accuracy and error of measurements.</li> </ul>	<p><b>Student Edition:</b> 383 #11, 384 #28-#29, 389 ex 2, 391 ex 5, 392 #3, 393 #20-#21, 400 ex 3, 401 #11, 404 #9</p> <p><b>Teacher Wraparound Edition:</b> AE 389, 391, 399</p>
<ul style="list-style-type: none"> <li>find perimeters of polygons.</li> </ul>	<p><b>Student Edition:</b> 19 #43-#44, 51 ex 2, 53 ex 4, 54 #3, 55 #12, 66 #36-#39, 71 #32, 73 #17-#18, 394 #33-#34, 631 ex 1, 632 ex 3, 634 #5-#6, 635 #18-#21 <i>Geometry Software Lab</i> 58-59</p> <p><b>Teacher Wraparound Edition:</b> A 636, 637; AE 51, 52, 631, 632, 633, 641</p>
<ul style="list-style-type: none"> <li>find areas of parallelograms, triangles, trapezoids and regular polygons.</li> </ul>	<p><b>Student Edition:</b> 51 ex 2, 52 ex 3, 53 ex 4, 54 #3, 55 #20-#23, 56 #42, 66 #36-#39, 73 #21, 630-636, 638-647 <i>Geometry Lab</i> 648 <i>Graphing Calculator Lab</i> 637</p> <p><b>Teacher Wraparound Edition:</b> A 636, 637; AE 51, 52, 631, 632, 633, 641</p>
<ul style="list-style-type: none"> <li>state and apply properties of parallelograms and trapezoids.</li> </ul>	<p><b>Student Edition:</b> 325-330, 333-339, 356-362 <i>Graphing Calculator Lab</i> 332</p> <p><b>Teacher Wraparound Edition:</b> A 330, 339, 362; AE 326, 327, 328, 334, 335, 336, 357, 358, 362; DI 327, 335; F 327; PA 339; TNT 335</p>

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<ul style="list-style-type: none"> <li>write two-column, indirect, and paragraph proofs.</li> </ul>	<p><b>Student Edition:</b> 78-82, 90 #56-#61, 99-104, 105-109, 117 #36-#37, 118-123, 133 #11-#13</p> <p><b>Teacher Wraparound Edition:</b> A 82, 104, 109; AE 79, 80, 100, 101, 106, 107, 119, 120, 125, 127; DI 119</p>
<ul style="list-style-type: none"> <li>prove that triangles are congruent.</li> </ul>	<p><b>Student Edition:</b> 217-223, 225-232, 233 #14-#15, 234-241 <i>Geometry Lab</i> 242</p> <p><b>Teacher Wraparound Edition:</b> A 223, 232, 241; AE 218, 219, 226, 227, 228, 229, 235, 236, 237; DI 218  F 238; PA 219, 232; TNT 219</p>
<ul style="list-style-type: none"> <li>use corresponding parts of congruent triangles are cogruent (CPCTC) to prove that corresponding parts of two congruent triangles are congruent.</li> </ul>	<p><b>Student Edition:</b> 217-223, 225-232, 233 #14-#15, 234-241 <i>Geometry Lab</i> 242</p> <p><b>Teacher Wraparound Edition:</b> A 223, 232, 241; AE 218, 219, 226, 227, 228, 229, 235, 236, 237; DI 218; F 238; PA 219, 232; TNT 219</p>
<ul style="list-style-type: none"> <li>state and apply the Pythagorean theorem and its converse.</li> </ul>	<p><b>Student Edition:</b> 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</p> <p><b>Teacher Wraparound Edition:</b> A 439, 446; AE 441, 442, 443; PA 443; T 439</p>
<ul style="list-style-type: none"> <li>state and apply theorems relating sides and angles in triangles.</li> </ul>	<p><b>Student Edition:</b> 280-287, 290, 294 #10, 296-301, 309 #32-#34, 312 #18-#22 <i>Graphing Calculator Lab</i> 295</p> <p><b>Teacher Wraparound Edition:</b> A 287, 293, 295; AE 281, 283, 284, 290, 297, 298; DI 281, 297; F 282; PA 283, 298; T 295; TNT 297</p>
<ul style="list-style-type: none"> <li>recognize and solve special right triangles.</li> </ul>	<p><b>Student Edition:</b> 448-454, 462 #62-#63, 463 #7-#8, 470 #33-#35, 488 #18-#22, 491 #7-#8 <i>Geometry Lab</i> 447</p> <p><b>Teacher Wraparound Edition:</b> A 447, 454; AE 449, 450; DI 449; I 450; PA 454</p>

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<ul style="list-style-type: none"> <li>use the sine, cosine and tangent ratios to find side lengths and angle measurement in right triangles.</li> </ul>	<p><b>Student Edition:</b> 456-462, 463 #10-#16, 464-470, 471-477, 479-485 <i>Geometry Software Lab</i> 478</p> <p><b>Teacher Wraparound Edition:</b> A 462, 470, 477; AE 457, 458, 459, 465, 466, 472, 473, 474, 480, 481; DI 458, 466; PA 459, 465; TNT 473</p>
<ul style="list-style-type: none"> <li>recognize similar figures.</li> </ul>	<p><b>Student Edition:</b> 388-396, 397-403</p> <p><b>Teacher Wraparound Edition:</b> A 396, 403; AE 389, 390, 391, 398, 399; DI 389, 399; F 390, 398; PA 396, 403</p>
<ul style="list-style-type: none"> <li>use proportions to determine lengths of sides in similar triangles.</li> </ul>	<p><b>Student Edition:</b> 388-396, 397-403</p> <p><b>Teacher Wraparound Edition:</b> A 396, 403; AE 389, 390, 391, 398, 399; DI 389, 399; F 390, 398; PA 396, 403</p>
<ul style="list-style-type: none"> <li>calculate areas of similar figures.</li> </ul>	<p><b>Student Edition:</b> 57 #55, 395 #50-#52, 635 #27-#29, 645 #42-#45, 646 #58, 655 #45</p>
<ul style="list-style-type: none"> <li>identify parts of a circle.</li> </ul>	<p><b>Student Edition:</b> 578-586, 587 #14, 596 #40-#42, 606 #50-#52, 622 #35-#40, 625 #9, 627 #9 <i>Geometry Lab</i> 597-598</p> <p><b>Teacher Wraparound Edition:</b> A 586; AE 579, 580, 581, 582; PA 586</p>
<ul style="list-style-type: none"> <li>find circumferences and areas of circles.</li> </ul>	<p><b>Student Edition:</b> 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><b>Teacher Wraparound Edition:</b> AE 51, 651, 652; GL 651; PA 652</p>
<ul style="list-style-type: none"> <li>determine measures of central angles and arcs in a circle.</li> </ul>	<p><b>Student Edition:</b> 578-586, 587 #14, 596 #40-#42, 606 #50-#52, 622 #35-#40, 625 #9, 627 #9 <i>Geometry Lab</i> 597-598</p> <p><b>Teacher Wraparound Edition:</b> A 586; AE 579, 580, 581, 582; PA 586</p>

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<ul style="list-style-type: none"> <li>state and apply properties of circles involving chords and tangents and the angles formed by them.</li> </ul>	<p><b>Student Edition:</b> 578-586, 587 #14, 596 #40-#42, 606 #50-#52, 622 #35-#40, 625 #9, 627 #9 <i>Geometry Lab</i> 597-598</p> <p><b>Teacher Wraparound Edition:</b> A 586; AE 579, 580, 581, 582; PA 586</p>
<ul style="list-style-type: none"> <li>analyze properties of 3-D shapes by constructing models and by drawing and interpreting 2-D representations of them.</li> </ul>	<p><b>Student Edition:</b> 680-685, 686, 691 #41-#43, 693, 697 #37-#38, 698 #1-#2, 700, 706 <i>Geometry Lab</i> 712</p> <p><b>Teacher Wraparound Edition:</b> AE 681, 682; GL 712; PA 685; TNT 682, 683</p>
<ul style="list-style-type: none"> <li>find lateral areas, surface areas, and volumes of prisms, cylinders, pyramids, and cones.</li> </ul>	<p><b>Student Edition:</b> 686, 693-697, 699-705, 706-710, 728-735, 742 <i>Reading Math</i> 692</p> <p><b>Teacher Wraparound Edition:</b> A 691, 692, 697, 705, 735, 742; AE 687, 688, 694, 700, 701; DI 700; F 688, 692, 695; I 701; TNT 702</p>
<ul style="list-style-type: none"> <li>find surface area and volume of a sphere.</li> </ul>	<p><b>Student Edition:</b> 711-717, 722 #29-#33, 723 #2, 725 #6, 743-748, 749 #14-#17, 753 ex 2, 754 #10, 757 #43-#46 <i>Geometry Lab</i> 712</p> <p><b>Teacher Wraparound Edition:</b> A 748; AE 712, 713, 714, 717, 744, 745, 753; DI 713, 745; F 712; GL 712; PA 743; T 743</p>
<ul style="list-style-type: none"> <li>investigate effect on perimeter, area and volume if a dimension is doubled or tripled.</li> </ul>	<p><b>Student Edition:</b> 57 #55, 395 #50-#52, 635 #27-#29, 645 #42-#45, 646 #58, 655 #45, 690 #29-#33, 716 #33-#35, 734 #26, 741 #25, 748 #39, 750-757 <i>Spreadsheet Lab</i> 736</p> <p><b>Teacher Wraparound Edition:</b> AE 751, 753; F 752; SI 752</p>
<ul style="list-style-type: none"> <li>use inductive and deductive reasoning to solve problems.</li> </ul>	<p><b>Student Edition:</b> 78-82, 90 #56-#61, 99-104, 105-109, 117 #36-#37, 118-123, 133 #11-#13</p> <p><b>Teacher Wraparound Edition:</b> A 82, 104, 109; AE 79, 80, 100, 101, 106, 107, 119, 120, 125, 127; DI 119</p>

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<ul style="list-style-type: none"> <li>solve real world and mathematical problems using geometric models.</li> </ul>	<p><b>Student Edition:</b> 18 #41, 27 #46-#49, 46 #33, 81 #33-#35, 89 #42-#44, 95 #25-#26, 116 #26-#27, 169 #33-#34, 176 #6, 206 #27, 237 ex 3, 276 #28-#31, 300 #29-#30, 305 ex 4, 306 #5, 322 #31, 338 #17</p> <p><b>Teacher Wraparound Edition:</b> AE 237, 305</p>
<ul style="list-style-type: none"> <li>analyze patterns produced by processes of geometric change and express them in terms of iteration, approximation, limits, selfsimilarity and fractals.</li> </ul>	<p><b>Student Edition:</b> 78-82, 90 #56-#61 <i>Geometry Lab</i> 320 <i>Graphing Calculator Lab</i> 387</p> <p><b>Teacher Wraparound Edition:</b> AE 79, 80; GL 320; PA 82; T 387; TNT 79</p>
<ul style="list-style-type: none"> <li>use transformational geometry to describe changes in shape, size, and orientation.</li> </ul>	<p><b>Student Edition:</b> 497-503, 504-509, 510-517, 518 #1-#2, 524 #38-#41 <i>Geometry Lab</i> 496</p> <p><b>Teacher Wraparound Edition:</b> A 503, 509, 517; AE 494, 499, 504, 505, 511, 512; DI 512; F 512; PA 509; T 496; TNT 499</p>
<ul style="list-style-type: none"> <li>recognize and locate lines of symmetry.</li> </ul>	<p><b>Student Edition:</b> 500 ex 4, 501 #8-#9, 518 #4-#6, 545 #17</p> <p><b>Teacher Wraparound Edition:</b> AE 500</p>
<ul style="list-style-type: none"> <li>* construct congruent angles and segments and bisectors of angles and segments.</li> </ul>	<p><b>Student Edition:</b> <i>Construction</i> 16, 25, 33, 35, 268</p>
<ul style="list-style-type: none"> <li>* define and construct perpendicular bisectors.</li> </ul>	<p><b>Student Edition:</b> <i>Construction</i> 266</p>
<ul style="list-style-type: none"> <li>* construct parallel lines.</li> </ul>	<p><b>Student Edition:</b> <i>Construction</i> 172</p>
<ul style="list-style-type: none"> <li>* use coordinate geometry in proofs.</li> </ul>	<p><b>Student Edition:</b> 251-255, 260 #30-#33, 261 #12, 262 #5, 277 #44-#46, 287 #56, 301 #42-#43</p> <p><b>Teacher Wraparound Edition:</b> A 255; AE 252, 253; TNT 253</p>