



# Contemporary Mathematics in Context

A Unified Approach  
**Course 3**  
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STANDARDS	PAGE REFERENCES
<b>1. NUMBER OPERATIONS AND CONCEPTS</b>	
<b>Students use numbers, number sense, and number relationships in a problem-solving situation.</b>	
1. Students represent and apply real numbers in a variety of forms.	<b>Student Edition:</b> 176 #2, 195 #8d, 213 #5, 217 #3, 218 #a-#b, 256 #13, 257 #e <i>Checkpoint 214</i>
2. Students apply the structure and properties of the real number system.	<b>Student Edition:</b> 194, 195 #6, 199 #6, 201 #b, 204 #1-#2, 206 #3 <i>Checkpoint 196, 200</i>
3. Students explain their choice of estimation and problem-solving strategies and justify results of solutions in problem-solving situations involving real numbers.	<b>Student Edition:</b> 6-10, 14-16, 26-27, 28-31, 47-48, 49-51, 68-73, 93-95, 229 #1 <i>Checkpoint 13</i>
4. Students use proportional reasoning to solve problems.	<b>Student Edition:</b> 6 #1, 10, 11-13, 15 #5, 298, 300 #4, 322 #2 <b>Teacher's Guide:</b> I T298

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<b>2. GEOMETRY</b>	
<b>Students apply geometric concepts, properties, and relationships in a problem-solving situation.</b>	
1. Students use transformations, congruency, symmetry, similarity, perpendicularity, parallelism, and the Pythagorean Theorem to solve problems.	<b>Student Edition:</b> 441-445, 446-448, 449-452, 453-461, 462-465, 466-468, 469-479
2. Students communicate, using mathematical language, to: <ul style="list-style-type: none"> <li>• Interpret, represent, or create geometric figures;</li> <li>• Draw or build figures from a mathematical description;</li> <li>• Analyze properties and determine attributes of 2- and 3-dimensional objects.</li> </ul>	<b>Student Edition:</b> 282-287, 288-296, 297-303, 304-309, 310-315, 316-318, 319-324 <b>Teacher's Guide:</b> CMT T309; I T304; JE T309
3. Students communicate the reasoning used in identifying geometric relationships in problem-solving situations.	<b>Student Edition:</b> 304-309, 312 #1, 313 #4a-#4b, 317 #3, 318 #8, 320 #2, 321 #5, 322 #5, 329 #5 <i>On Your Own</i> 319 <b>Teacher's Guide:</b> CMT T309; JE T309
4. Students solve problems involving the coordinate plane such as the distance between two points, the midpoint, and slope.	<b>Student Edition:</b> 19 #2-#3, 242 #4, 558-561 <i>Checkpoint</i> 38
5. Students connect geometry with other mathematical topics.	<b>Student Edition:</b> 26-27, 30 #4, 32 #1, 40 #1, 41 #5, 43 #1, 44 #2, 45 #5
<b>3. MEASUREMENT</b>	
<b>Students use a variety of tools and techniques of measurement in a problem-solving situation.</b>	
1. Students apply estimation and measurement using the appropriate methods and units to solve problems involving length, weight/mass, area, surface area, volume, and angle measure.	<b>Student Edition:</b> 18 #4, 23 #2c, 426 #5e, 435 #2b, 553 #1d, 557 #5 <b>Teacher's Guide:</b> E T426
2. Students demonstrate an understanding of both metric and U.S. customary systems. Students are able to convert within each system.	<b>Student Edition:</b> 489-490

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3. Students identify and apply scale, ratios, and proportions in solving measurement problems.	<b>Student Edition:</b> 311 #3
4. Students solve problems of angle measure including those involving polygons or parallel lines cut by a transversal.	This standard can be met in Glencoe's <i>Contemporary Mathematics Course 4</i> © 2005. <b>Student Edition:</b> 239 #8, 299 #8, 405 #8, 599 #10, 665 #8
5. Students solve indirect measurement problems.	<b>Student Edition:</b> 311 #3
<b>4. ALGEBRA</b>	
<b>Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation.</b>	
1. Students use algebraic concepts, symbols, and skills to represent and solve real-world problems.	<b>Student Edition:</b> 426 #5, 434 #1, 436 #3, 459 #5, 480 #1a, 482 #3a <i>Checkpoint</i> 178, 427 <b>Teacher's Guide:</b> I T431; SS T178
2. Students write, model, and evaluate expressions, functions, equations, and inequalities.	<b>Student Edition:</b> 226-228, 229-233, 234-239 <b>Teacher's Guide:</b> I T226; SS T228
3. Students graph linear equations and interpret the results in solving algebraic problems.	This standard can be met in Glencoe's <i>Contemporary Mathematics Course 4</i> © 2005. <b>Student Edition:</b> 367 #2, 552-554, 661-663
4. Students solve, graph, or interpret systems of linear equations.	<b>Student Edition:</b> 47-48, 52-55, 56-62, 68-72, 74-76, 78-79 <b>Teacher's Guide:</b> CMT T55, T72; I T47; SS T55
5. Students connect algebra with other mathematical topics.	<b>Student Edition:</b> 426 #5, 434 #1, 436 #3, 459 #5, 480 #1a, 482 #3a <i>Checkpoint</i> 178, 427 <b>Teacher's Guide:</b> I T431; SS T178

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<b>5. DATA ANALYSIS AND PROBABILITY</b>	
<b>Students use data analysis and probability to analyze given situations and the results of experiments.</b>	
1. Students apply knowledge of mean, median, mode, and range to interpret and evaluate information and data.	<b>Student Edition:</b> 347 #2a, 349 #7-#8, 352 #2a, 353 #7, 356 #2a, 358 #1, 359 #2 <i>On Your Own</i> 350, 354
2. Students draw reasonable inferences from statistical data and/or correlation/best fit line to predict outcomes.	<b>Student Edition:</b> 50 #3, 52 #1, 53 #2, 401 #3, 459 #3, 561-564 <i>Checkpoint</i> 51 <b>Teacher's Guide:</b> I T561
3. Students communicate about the likelihood of events using concepts from probability. <ul style="list-style-type: none"> <li>• sample space</li> <li>• evaluate simple probabilities</li> <li>• evaluate experimental vs. theoretical</li> </ul>	<b>Student Edition:</b> 266 #1b, 398 #3, 405-410, 411 #1-#2, 412 #1, 413 #4, 414 #1, 415 #3 <b>Teacher's Guide:</b> CMT T410; I T405
4. Students determine, collect, organize, and analyze relevant data needed to make conclusions.	<b>Student Edition:</b> 117 #4, 133 #1, 134 #3, 165 #1 <i>On Your Own</i> 128 <b>Teacher's Guide:</b> TN T168