



# Contemporary Mathematics in Context

A Unified Approach  
Course 4  
© 2003

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> 51 #10, 107 #10, 159-163, 164 #1, 165 #4, 239 #9, 257 #10, 299 #10, 353 #10, 641 #10
2. Students apply the structure and properties of the real number system.	<b>Student Edition:</b> 165 #4c, 176 #2, 387 #5, 393 #7, 394 #9, 395 #b, 401 #1, 403 #4a, 440 #2a, 442 #7, 454 #2 <i>Checkpoint</i> 168, 395, 443
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> 29 #1, 30 #3, 49 #4, 55 #2, 88 #4, 109 #1e, 153 #5c, 630 #2c <i>Checkpoint</i> 35 <i>On Your Own</i> 37
4. Students use proportional reasoning to solve problems.	<b>Student Edition:</b> 50 #1, 134 #1, 178 #1, 206 #4, 268 #1, 279 #3, 287 #7, 663 #4, 684-687 <b>Teacher's Guide:</b> A T821

STANDARDS	PAGE REFERENCES
<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> 21 #5, 159 #2, 457 #7, 476 #2, 479 #10, 481 #3, 507 #7, 544 #4, 545 #7, 571 #7, 599 #7 <i>Think About This Situation</i> 480
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> 514-517, 523-526, 527-534, 538-539 #1, 540 #2, 547-551, 552-554, 557 #5, 558-561, 566 #2
3. Students communicate the reasoning used in identifying geometric relationships in problem-solving situations.	<b>Student Edition:</b> 66 #1, 397 #2, 418-419 #4, 420 #3, 422 #1, 431 #5, 514, 523 #1, 535 #1, 573 #1
4. Students solve problems involving the coordinate plane such as the distance between two points, the midpoint, and slope.	<b>Student Edition:</b> 84 #4, 89 #6, 97 #7, 467 #1, 468 #3, 469 #4, 476 #2 <i>On Your Own</i> 86, 98, 471
5. Students connect geometry with other mathematical topics.	<b>Student Edition:</b> 66 #1, 397 #2, 418-419 #4, 420 #3, 422 #1, 431 #5, 514, 523 #1, 535 #1, 573 #1
<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> 107 #8, 239 #8, 331 #8, 418 #4, 507 #8, 668 #2, 669 #4, 641 #8 <i>Checkpoint</i> 670 <i>On Your Own</i> 412
2. Students demonstrate an understanding of both metric and U.S. customary systems. Students are able to convert within each system.	Both systems are used throughout this Course, i.e., <b>Student Edition:</b> 9 #1, 117 #5, 373 #1, 374 #3, 417 #2, 418 #4, 535 #1, 541 #1, 641 #8 <i>On Your Own</i> 412

STANDARDS	PAGE REFERENCES
3. Students identify and apply scale, ratios, and proportions in solving measurement problems.	<b>Student Edition:</b> 51 #8, 73 #8, 89 #6, 331 #8, 470 #6, 493 #8, 599 #10, 627 #8, 668 #2c, 669 #2c
4. Students solve problems of angle measure including those involving polygons or parallel lines cut by a transversal.	<b>Student Edition:</b> 239 #8, 299 #8, 405 #8, 599 #10, 665 #8
5. Students solve indirect measurement problems.	<b>Student Edition:</b> 51 #8, 73 #8, 89 #6, 331 #8, 470 #6, 493 #8, 599 #10, 627 #8, 668 #2c, 669 #2c
<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> 24 #4, 25 #9, 26 #11, 124 #3, 128 #5, 130 #2, 132 #4, 166 #5, 171 #4
2. Students write, model, and evaluate expressions, functions, equations, and inequalities.	<b>Student Edition:</b> 37-40, 407 #1, 410 #5, 413 #2, 421 #5 <i>On Your Own</i> 412 <b>Teacher's Guide:</b> CMT T43; I T472
3. Students graph linear equations and interpret the results in solving algebraic problems.	<b>Student Edition:</b> 367 #2, 552-554, 661-663
4. Students solve, graph, or interpret systems of linear equations.	<b>Student Edition:</b> 50 #3, 367 #2-#3, 380 #3, 404 #3, 544 #3, 567 #2, 598 #5, 626 #3, 678 #3, 690 #4
5. Students connect algebra with other mathematical topics.	<b>Student Edition:</b> 24 #4, 25 #9, 26 #11, 124 #3, 128 #5, 130 #2, 132 #4, 166 #5, 171 #4
<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.	Data analysis can be found on the following pages: <b>Student Edition:</b> 158, 162 #9, 166 #5, 180, 190 #1, 191 #3, 192 #1, 194 #2 <i>On Your Own</i> 185, 189

STANDARDS	PAGE REFERENCES
<p>2. Students draw reasonable inferences from statistical data and/or correlation/best fit line to predict outcomes.</p>	<p><b>Student Edition:</b> 180-185, 186-189, 190 #2, 191 #3, 192 #1, 195 #3, 198-201, 202-207, 212 #8</p> <p><b>Teacher's Guide:</b> I T232; N T232</p>
<p>3. Students communicate about the likelihood of events using concepts from probability.</p> <ul style="list-style-type: none"> <li>• sample space</li> <li>• evaluate simple probabilities</li> <li>• evaluate experimental vs. theoretical</li> </ul>	<p><b>Student Edition:</b> 241 #1, 242 #3, 243 #5, 250 #2, 251 #3, 252 #1, 253 #4, 254 #1, 319 #1, 321 #3, 323 #1</p> <p><i>Checkpoint 322</i> <i>On Your Own 286</i> <i>Think About This Situation 286</i></p> <p><b>Teacher's Guide:</b> CMT T293; I T290</p>
<p>4. Students determine, collect, organize, and analyze relevant data needed to make conclusions.</p>	<p><b>Student Edition:</b> 277 #1, 324 #3, 326 #1-#2, 334 #3, 335 #5, 348 #1</p> <p><i>On Your Own 325</i> <i>Think About This Situation 318</i></p>