



**WYOMING**  
**Mathematics Content and Performance Standards – Grade 6**  
***Mathematics: Applications and Concepts***  
**Course 1 © 2006**

BENCHMARKS	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 use the concept of place value to read and write decimals (to 1000ths) in words, standard, and expanded form.	SE: 102-104, 110 #29, #30, 114 #1, 130 #4, 202-203, 586 TWE: A 105 B 202 ICE 103
2. Students multiply decimals (10ths & 100ths) and divide whole numbers by 2-digit divisors and divide decimals by whole numbers.	SE: 141-143, 144-147, 167, 169 #10-#12, 170 #6 <i>Hands-On Lab</i> 139-140 <i>The Game Zone</i> 149 <i>Interdisciplinary Project</i> 97 TWE: ICE 142, 145
3. Students represent the number line using integers.	SE: 294-298, 300-303, 304-307, 313 #48-#51, 325 #18-#33 <i>Interdisciplinary Project</i> 291 TWE: A 307 DI 301, 305 ICE 295
4. Students explain their choice of estimation and problem solving strategies and justify results when performing number operations with fractions and decimals in problem-solving situations.	SE: 111-113, 116-119, 124 #44-#47, 128 #17-#27, 129 #20, #21, 130 #7, 154 #37, 155 #38, #39, 170 #6, 219-222, 223-225 <i>Hands-On Lab</i> 218 <i>Problem-Solving Strategy</i> 125-126, 156-157 <i>Study Tip</i> 153 <i>Test-Taking Tip</i> 170 TWE: A 119, 258 B 111, 116, 141 DI 223 ICE 112, 117, 220, 224
5. Students identify prime and composite numbers and apply prime factorization to numbers less than 100.	SE: 14-17, 19 Ex 4, 21 #50-#53, 22 #10-#11, 27 #42-#45, 43 #22-#27, 45 #10-#12, 46 #5, 130 #2 <i>Skill Practice</i> 120 TWE: A 17, 179 B 14 DI 15 ICE 15, 19

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<p>6. Students demonstrate an understanding of fractions and decimals by:</p> <ul style="list-style-type: none"> <li>● representing fractions as division of whole numbers;</li> <li>● converting between mixed numbers and improper fractions;</li> <li>● simplifying fractions and mixed numbers;</li> <li>● writing fractions in equivalent forms;</li> <li>● using parts of a set;</li> <li>● rounding decimal numbers to 10ths, 100ths, and whole numbers (units) place; and</li> <li>● converting between decimals (from .01 to .99), fractions and representing percentages.</li> </ul>	<p>SE: 111-113, 119 #41, 128 #14-#16, 182-185, 186-189, 190 #6-#8, 197 #34-#37, 202-205, 206-209, 211, 212, 213, 214 #5, 289 #15, 404-406, 412 #43 <i>Hands-On Lab</i> 181</p> <p>TWE: A 189, 209 B 202 DI 187, 404 ICE 112, 183, 187, 203, 207, 405 PS 213</p>
<p>7. Students add and subtract mixed numbers with like denominators.</p>	<p>SE: 240-243, 250 #37, #38, 251 #18, 252 #6</p> <p>TWE: B 240 ICE 241</p>
<p>8. Students represent repeated multiplication in exponential form.</p>	<p>SE: 18-21, 22 #12, #13, 27 #41, 43 #28-#31, 45 #13, 46 #7, 47 #18, 131 #10</p> <p>TWE: ICE 19 #1 PC 4F</p>
<p><b>2. GEOMETRY</b> <b>Students apply geometric concepts, properties, and relationships in a problem-solving situation.</b></p>	
<p>1. Students classify, describe, compare, and draw representations of 1- and 2- dimensional objects and angles.</p>	<p>SE: 161-164, 168 #48-#53, 215 #20, 504, 506-509, 516 Ex 2, 517 #25-#27, 522-525, 543 #13, #14, #19, 549 #24 <i>Problem-Solving Strategy</i> 520-521 <i>Hands-On Lab</i> 526-527 <i>The Game Zone</i> 519</p> <p>TWE: A 164, 509 DI 507, 523 B 161, 522 ICE 162, 507 PC 504F, 544F PS 169</p>
<p>2. Students identify and classify congruent objects by properties appropriate to grade level.</p>	<p>SE: 534-536, 540 #32-#34, 541 #14-#15, 542 #8, 554 #29-#31 <i>Hands-On Lab</i> 513-514, 526-527 <i>Problem-Solving Strategy</i> 521 #9</p> <p>TWE: DI 534</p>
<p>3. Students communicate the reasoning used in identifying geometric relationships in problem-solving situations appropriate to grade level.</p>	<p>SE: 171 #16, 193 #8, 215 #20, 253 #10, 515 Ex #1, 517 #18, 523 Ex 2, 528-531, 534-536, 543 #19, 582 #8 <i>Hands-On Lab</i> 526-527, 537</p> <p>TWE: A 531 DI 529 ICE 523</p>

BENCHMARKS	PAGE REFERENCES
<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 of length to content problems and express the results in metric units (centimeters and meters).	SE: 130 #8, 476-479, 499 Ex 4 <i>Hands-On Lab</i> 474-475 <i>The Game Zone</i> 483 TWE: DI 145, 477
2. Students apply estimation and measurement of weight to content problems and express the results in U.S. customary units (ounces, pounds, and tons).	SE: 220 Ex 3, 462, 470-473 <i>Problem-solving Strategy</i> 193 #10, 227 #6 TWE: ICE 117 #4, 471
3. Students apply estimation and measurement of capacity to content problems and express the results in U.S. customary units (teaspoons, tablespoons, cups, pints, quarts, gallons).	SE: 113 #25, 154 #37, 470-473, 499 TWE: A 258
4. Students demonstrate relationships within the U.S. customary units for weight and capacity and within the metric system (centimeters to meters) in problem-solving situations.	SE: 279 #42-#43, 462, 470-473, 484-487, 499, 501 #20, #21 TWE: A 473 DI 471, 485
5. Students determine the area and perimeter of regular polygons and the area of parallelograms, with and without models.	SE: 39-41, 53 #21, 158-161, 171 #16, 243 #34, #35, 268 #18, 329 #14, 546-549, 582 #8 <i>Hands-On Lab</i> 464, 474-475 <i>Spreadsheet Investigation</i> 469 TWE: A 549 DI 158, 547 ICE 159, 547
<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 recognize, describe, extend, create, and generalize patterns, such as numeric sequences, by using manipulatives, numbers, graphic representations, including charts and graphs.	SE: 9 #7, 21 #42-#47, 47 #25, 67 #3-#6, 196 #23-#24, 209 #43, 282-284, 286 #33-#36, 289 #16 <i>Problem-Solving Strategy</i> 280-281 TWE: A 284 B 66, 282 DI 280 ICE 280
2. Students apply their knowledge of patterns to describe a constant rate of change when solving problems.	With the definition provided, the following references can be used to meet this benchmark. SE: 47 #25, 289 #16
3. Students represent the idea of a variable as an unknown quantity, a letter, or a symbol within any whole number operation.	SE: 28-31, 34-37, 44 #38-#47, 374 #8, #9 <i>Problem-Solving Strategy</i> 358-359 <i>Test-Taking Tip</i> 374 TWE: ICE 29

BENCHMARKS	PAGE REFERENCES
<b>5. DATA ANALYSIS AND PROBABILITY</b> Students use data analysis and probability to analyze given situations and the results of experiments.	
1. Students systematically collect, organize, and describe/represent numeric data using line graphs.	SE: 48, 56-59, 67 #3-#6, #7-#8, 68 #14-#18, 87 Ex 2, 91, 95 #14 <i>Problem-Solving Strategy</i> 55 #7 <i>Spreadsheet Investigation</i> 60-61 TWE: DI 57 ICE 55, 58, 67
2. Students, given a scenario, recognize and communicate the likelihood of events using concepts from probability (i.e., impossible, equally likely, certain) appropriate to grade level.	SE: 424, 428-431, 433-436, 454, 455, 473 #43-#45 <i>Hands-On Lab</i> 426-427 <i>The Game Zone</i> 443 <i>Problem-Solving Strategy</i> 448-449 TWE: A 430 PS 457

### Codes Used for TWE Pages

A	Assess
B	Bellringer
DI	Daily Intervention
ICE	In-Class Examples
PC	Project CRISS
PS	Portfolio Suggestion