



**WYOMING**  
**Mathematics Content and Performance Standards – Grade 11**  
**Algebra 2 © 2005**

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 represent and apply real numbers in a variety of forms.	SE: 5 #1-#16, 10 #59-#66, 11-18, 814 TWE: AA 13 CC 13 DI 13 H 11
2. Students apply the structure and properties of the real number system.	SE: 11-12, 14 #1-#2, 15 #4-#6, 16 #40, 17 #72, 32 #64-#67, 39 #63-#65, 51 #10-#12 TWE: A 18 H 11
3. Students explain their choice of estimation and problem-solving strategies and justify results of solutions in problem-solving situations involving real numbers.	SE: 225 ex 7, 296 ex 4 TWE: A 299 ICE 296
4. Students use proportional reasoning to solve problems.	SE: 181 #59-#64, 471 #13-#24, 490 #63-#66, 494 ex 3
<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.	SE: 175-181, 188 #56-#58, 194 #45-#47, 212 #23-#26, 699 #1-#4, 720-721 ex 5, 820-821 TWE: A 181 DI 177 STP 176
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>	SE: 175-181, 188 #56-#58, 211-212 #23-#26, 817-819 TWE: A 181 DI 177 ICE 178
3. Students communicate the reasoning used in identifying geometric relationships in problem-solving situations.	SE: 737 #31, 817-818
4. Students solve problems involving the coordinate plane such as the distance between two points, the midpoint, and slope.	SE: 68-74, 110-115, 412-416, 425 #50-#52, 431 #60-#61, 462 #11-#16, 467 #4-#9 <i>Algebra Activity 417</i> TWE: A 115, 416

<b>BENCHMARKS</b>	<b>PAGE REFERENCES</b>
5. Students connect geometry with other mathematical topics.	SE: 25 #27-#28, 26 #64, 27 #83, 45 #51-#52, 67 #60, 73 #51, 79 #41-#43, 113 #37-#38, 121 #42, 187 #42
<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.	SE: 22 ex 6, 27 #83, 255 #49, 266 #12, 382 #55, 415 #53, 862 #4-#5
2. Students demonstrate an understanding of both metric and U.S. customary systems. Students are able to convert within each system.	SE: 390, 393 #12-#13, 394 #42, #43 TWE: H 390
3. Students identify and apply scale, ratios, and proportions in solving measurement problems.	SE: 705 ex 6, 706 #13, 707 #41-#42, 821 #19-#20
4. Students solve problems of angle measure including those involving polygons or parallel lines cut by a transversal.	SE: 709-715
5. Students solve indirect measurement problems.	SE: 705 ex 6, 706 #13, 707 #41-#42, 821 #19-#20
<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.	SE: 6-10, 23 ex 8, 25 #63, 26 #65-#70, 27 #74, 30 #14-#16, 31 #47-#49, 37 #14 TWE: A 10 H 6
2. Students write, model, and evaluate expressions, functions, equations, and inequalities.	SE: 229-232, 233-238, 244 #63-#68, 249 #71-#72, 256 #62-#63, 267 #54-#59 TWE: A 232, 238 DI 236 TTT 234
3. Students graph linear equations and interpret the results in solving algebraic problems.	SE: 109 #1-#6, 110-115, 122 #54-#56, 127 #45-#47, 145 #11-#14 TWE: A 115 CC 112 H 110
4. Students solve, graph, or interpret systems of linear equations.	SE: 110-115, 116-122, 123-127, 129-134, 138-144, 189-194, 202-207 <i>Algebra Activity</i> 136-137 <i>Graphing Calculator Investigation</i> 128, 208 TWE: A 135
5. Students connect algebra with other mathematical topics.	SE: 25 #27-#28, 26 #64, 27 #83, 45 #51-#52, 67 #60, 73 #51, 79 #41-#43, 113 #37-#38, 121 #42, 187 #42

BENCHMARKS	PAGE REFERENCES
<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.	SE: 664-670, 680 #47, 690 #26-#28, 693 #3, 695 #19, 822-823 TWE: W 664
2. Students draw reasonable inferences from statistical data and/or correlation/best fit line to predict outcomes.	SE: 81-86, 95 #3-#4, 99 #52-#53, 103, 824, 825, 826-827 <i>Graphing Calculator Investigation 87-88</i> TWE: DI 82 ICE 82-83
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>	SE: 644-650, 651-657, 658-663 <i>Algebra Activity 681</i> <i>Study Tip 682</i> TWE: A 650, 652, 663 DI 654
4. Students determine, collect, organize, and analyze relevant data needed to make conclusions.	SE: 646-647 ex 4, 671-675, 676-680, 682-685, 824, 825, 826-827 <i>Algebra Activity 522, 681</i> TWE: A 680 DI 672, 677 TTT 86

### Codes Used for TWE Pages

A	Assess
AA	Algebra Activity
CC	Concept Check
DI	Daily Intervention
H	How
ICE	In Class Example
STP	Standard Test Practice
TTT	Teacher to Teacher
W	What