WYOMING
Mathematics Content and Performance Standards – Grade 11
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BENCHMARKS	PAGE REFERENCES
1. NUMBER OPERATIONS AND CONCEPTS **Students use numbers, number sense, and number relationships in a problem-solving situation.**	
1. Students represent and apply real numbers in a variety of forms.	SE: 5 #5-#12, 58 #2, 122 #1, 338 #1, 341 #9-#12, 734-735, 744-745
2. Students apply the structure and properties of the real number system.	SE: 94-95, 247, 734-735
3. Students explain their choice of estimation and problem-solving strategies and justify results of solutions in problem-solving situations involving real numbers.	SE: 19 #57, 74 #55, 87 #35, 144 #50, 157 #46, 163 #29, 279 #9, 286 #33, 338 #6, 782-794
4. Students use proportional reasoning to solve problems.	SE: 282-287, 297 #70-#72, 306 #53-#56, 333 #10-#17, 337 #4-#6, 338 #5 TWE: A 287 DI 283 TNT 284 TT 283
2. GEOMETRY **Students apply geometric concepts, properties, and relationships in a problem-solving situation.**	
1. Students use transformations, congruency, symmetry, similarity, perpendicularity, parallelism, and the Pythagorean Theorem to solve problems.	SE: 350-356, 363 #45-#50, 370 #72-#75, 393 #13-#14, 397 #7-#9, 463-468, 470-474, 476-481, 490-496 TWE: A 469
2. Students communicate, using mathematical language, to: • Interpret, represent, or create geometric figures; • Draw or build figures from a mathematical description; • Analyze properties and determine attributes of 2- and 3-dimensional objects.	SE: 45-50, 404-409, 411-416, 417-423, 424-430 *Geometry Software Investigation* 51, 132, 384, 448, 552
3. Students communicate the reasoning used in identifying geometric relationships in problem-solving situations.	SE: 89-93, 94-99, 101-106, 107-114, 118 #38 TWE: A 93, 100, 106, 114 DI 96
4. Students solve problems involving the coordinate plane such as the distance between two points, the midpoint, and slope.	SE: 21 ex 2, 23 ex 3b, 25 #23-#28, 26 #48-#49, 36 #52-#54, 43 #50-#55, 55 #20-#27, 57 #12-#14, 139-144, 150 #56-#58
5. Students connect geometry with other mathematical topics.	SE: 7 ex 3a, 10 #29, 23 ex 5, 33 #9-#10, 34 #34-#39, 42 #27-#30, 48 #10, 364-370, 620 #25-#27 TWE: BPK 365

BENCHMARKS	PAGE REFERENCES
3. MEASUREMENT **Students use a variety of tools and techniques of measurement in a problem-solving situation.**	
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: 689 ex 2, 691 #6, 693 #25-#28, 694 #33, 697 ex 1, 699 #7, 700 #25-#27, 705 #19, 706 #32, 732-733
2. Students demonstrate an understanding of both metric and U.S. customary systems. Students are able to convert within each system.	SE: 730-731
3. Students identify and apply scale, ratios, and proportions in solving measurement problems.	SE: 139-144, 290 ex 2, 292 ex 5, 293 #10, 294 #16, 296 #51-#52 TWE: H 139
4. Students solve problems of angle measure including those involving polygons or parallel lines cut by a transversal.	SE: 46, 48 #6, 49 #13, 56 #42, 126-131, 133-138, 404, 405 ex 1, 406, 407 #6-#7, 425 ex 1 TWE: DI 407
5. Students solve indirect measurement problems.	SE: 21-22, 300 #3, 354 #11, 369 #59-#60, 372 #3, 379 #3, 381 #15, 382 #38-#39 *Geometry Activity* 28, 349
4. ALGEBRA **Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation.**	
1. Students use algebraic concepts, symbols, and skills to represent and solve real-world problems.	SE: 58 #6, 74 #55, 171 #24, 173 #14, 331 #47, 501 ex 5, 509 #13-#14, 511 #45-#46, 658 #29, 670 #35
2. Students write, model, and evaluate expressions, functions, equations, and inequalities.	SE: 58 #6, 74 #55, 171 #24, 173 #14, 331 #47, 501 ex 5, 509 #13-#14, 511 #45-#46, 658 #29, 670 #35
3. Students graph linear equations and interpret the results in solving algebraic problems.	SE: 141 ex 4, 142 #10-#11, 143 #33-#38, 149 #48, 169 #27-#28, 171 #12-#15, 173 #15, 339 #13, 741
4. Students solve, graph, or interpret systems of linear equations.	SE: 158, 161 ex 3, 742-743 *Study Tip* 242
5. Students connect algebra with other mathematical topics.	SE: 7 ex 3a, 10 #29, 23 ex 5, 33 #9-#10, 34 #34-#39, 42 #27-#30, 48 #10, 49 #29-#31, 50 #32-#34, 135 ex 3
5. DATA ANALYSIS AND PROBABILITY **Students use data analysis and probability to analyze given situations and the results of experiments.**	
1. Students apply knowledge of mean, median, mode, and range to interpret and evaluate information and data.	SE: 245 #35-#38
2. Students draw reasonable inferences from statistical data and/or correlation/best fit line to predict outcomes.	SE: 18 #43-#45, 19 #52-#55, 63 #3, 143 #44-#46, 531 #3 *WebQuest* 23

BENCHMARKS	PAGE REFERENCES
3. Students communicate about the likelihood of events using concepts from probability. • sample space • evaluate simple probabilities • evaluate experimental vs. theoretical	SE: 164 #35, 265 #48-#49, 549 #7, 550 #31-#34, 648 #46 TWE: A 627 DI 624
4. Students determine, collect, organize, and analyze relevant data needed to make conclusions.	SE: 791 #2-#4 *WebQuest* 23

Codes Used for TWE Pages

A	Assess
BPK	Building on Prior Knowledge
DI	Daily Intervention
H	How
TNT	Tips for New Teachers
TT	Teaching Tip