



MathScape

Seeing and Thinking Mathematically

Course 2

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STANDARDS	PAGE REFERENCES
1. NUMBER OPERATIONS AND CONCEPTS	
Students use numbers, number sense, and number relationships in a problem-solving situation.	
1. Students represent and order rational numbers that are greater than or equal to 0 in a variety of equivalent forms in problem-solving situations.	<p>Student Edition: 26-27, 28-29, 30-31, 42-44, 54-55, 60-61, 78-79, 82, 84, 91, 96-97, 102-103, 124, 127, 162-163, 177</p> <p>Teacher's Guide: 25, 26A, 96A</p>
2. Students use basic operations with integers in problem-solving situations.	<p>Student Edition: 98-99, 100-101, 102-103, 126, 127</p> <p>Teacher's Guide: 93G, 100A, 101A, 102A, 103A</p>
3. Students divide decimal numbers by decimal numbers.	<p>Student Edition: 6-7, 12-13, 26-27, 34, 36, 42, 232-233, 236-237, 247-248, 260, 261, 265</p> <p>Teacher's Guide: 6A, 233A</p>
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 appropriate to grade level. Students add and subtract fractions and mixed numbers.	<p>Student Edition: 6-7, 8-9, 10-11, 12-13, 26-27, 34, 35, 36, 42, 160-161, 162-163, 170, 171, 177</p> <p>Teacher's Guide: 9A, 10A, 12A, 13A, 26A, 162A</p>

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5. Students multiply and divide fractions and mixed numbers.	Student Edition: 108-109, 129 Teacher's Guide: 108A
6. Students evaluate whole numbers expressed in exponential form.	See Glencoe's <i>Mathscape: Seeing and Thinking Mathematically Course 3</i> © 2005 Student Edition: 300-301, 313
7. Students apply the order of operations (whole numbers including grouping symbols and operations, excluding roots and powers) in problem-solving situations.	Student Edition: 100-101, 102-103, 127, 188-189, 214, 238-239, 262 Teacher's Guide: 102A, 103A, 183, 189A
2. GEOMETRY	
Students apply geometric concepts, properties, and relationships in a problem-solving situation.	
1. Students classify and describe one- and two-dimensional geometric objects, including: <ul style="list-style-type: none"> • lines, rays, segments, and angles; • parallel and perpendicular relationships; and • regular polygon types. 	Student Edition: 150-151, 164-165, 166-167, 172, 274-275, 276-277, 278-279, 280-281, 284-285, 286-287, 290-291, 294-295 Teacher's Guide: 150A, 164A, 271G, 271H, 276A, 279A, 281A, 282, 283, 284A, 291A, 294A
2. Students make conjectures about geometric figures based on knowledge of congruence and similarity.	Student Edition: 280-281, 288-289, 290-291, 300-301, 305, 308 Teacher's Guide: 281A, 283, 288A, 289A
3. Students communicate the reasoning used in identifying geometric relationships in problem-solving situations appropriate to grade level.	Student Edition: 288-289, 290-291, 300-301, 308, 309, 313 Teacher's Guide: 291A, 301A
3. MEASUREMENT	
Students use a variety of tools and techniques of measurement in a problem-solving situation.	
1. Students apply estimation and measurement of length to content problems and convert within the U.S. customary (in, ft, yd, mi) and within the metric system (mm, cm, m, km).	Student Edition: 140-141, 144-145, 146-147, 168, 170, 171, 296-297, 311 Teacher's Guide: 137G, 138, 139, 146A, 296A

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2. Students apply estimation and measurement of weight to content problems expressing the results in metric units (g, kg).	Student Edition: 6-7, 10-11, 12-13, 34, 36, 37 Teacher's Guide: 4, 5, 7A, 10A, 13A
3. Students apply estimation and measurement of capacity to content problems expressing the results in metric units (liters).	See Glencoe's <i>Mathscape: Seeing and Thinking Mathematically Course 3</i> © 2005 Student Edition: 118-119, 132
4. Students determine the circumference of a circle using models.	Student Edition: 294-295, 310 Teacher's Guide: 292, 293, 294A, 295A
5. Students calculate the areas of triangles and trapezoids.	Student Edition: 154-155, 156-157, 160-161, 174, 175, 176 Teacher's Guide: 148, 149, 154A, 155A, 158, 159, 160A
6. Students measure angles with a protractor.	Student Edition: 28-29, 43, 274-275, 276-277, 302, 303 Teacher's Guide: 25, 271G, 272, 273, 274A
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 translate word phrases, which involve addition and subtraction, into mathematical expressions.	Student Edition: 184-185, 188-189, 212, 213 Teacher's Guide: 182, 183, 184A, 188A, 189A
2. Students solve one-step linear equations.	Student Edition: 198-199, 200-201, 204-205, 208-209, 218, 219, 220, 221 Teacher's Guide: 197A, 202, 203, 204A, 209A
3. Students evaluate algebraic expressions and formulas, using order of operations, given positive integer values for variables.	Student Edition: 238-239, 262

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4. Students understand and use basic concepts of the coordinate system, including plotting points in all four quadrants.	Student Edition: 194-195, 196-197, 198-199, 216, 217, 218 Teacher's Guide: 194A, 195A, 199A, 202, 203
5. DATA ANALYSIS AND PROBABILITY	
Students use data analysis and probability to analyze given situations and the results of experiments.	
1. Students systematically collect, organize, describe, and analyze data using histograms.	The following pages could be used with explanations of histograms as special bar graphs. Student Edition: 162, 163, 177
2. Students calculate mean, median, mode, and range for data sets and use in real-world setting.	<i>Mean</i> is defined on the following page. Student Edition: 132 #16
3. Students predict, compare, and report as ratios probable outcomes of experiments or simulations (i.e., impossible, equally likely, certain).	Student Edition: 50-51, 52-53, 54-55, 60-61, 62-63, 68-69, 70-71, 74-75, 76-77, 78-79, 81, 82, 84, 85, 88, 89, 90, 91 Teacher's Guide: 48, 49, 52A, 56, 57, 64, 72, 73, 74A, 75A, 78A