

New York State Mathematics Content Strands, Grade 6, Correlated to *Glencoe MathScape, Course 1* and *Quick Review Math Handbook Book 1*

The lessons that address each Performance Indicator are listed, and those in which the Performance Indicator is the primary focus are indicated in **bold**.

Strands and Performance Indicators		Student Edition Pages
Strand Number Sense and Operations		
<i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems.</i>		
Number Systems		
6.N.1	Read and write whole numbers to trillions	52-69, 80-87 Quick Review Math Handbook Book 1 68 #1-#5, 70, 73 #1-#4
6.N.2	Define and identify the commutative and associative properties of addition and multiplication	104, 146 Quick Review Math Handbook Book 1 7, 11, 74, 76, 77 #28, #29, 262-263, 269
6.N.3	Define and identify the distributive property of multiplication over addition	104, 146 Quick Review Math Handbook Book 1 18, 75, 76, 77 #17-#19, 264, 266, 269 #24
6.N.4	Define and identify the identity and inverse properties of addition and multiplication	Opportunity to address the objective: 104, 146, 335 Quick Review Math Handbook Book 1 26, 75, 77 #30
6.N.5	Define and identify the zero property of multiplication	Opportunity to address the objective: 104, 146 Quick Review Math Handbook Book 1 75, 77 #11-#13
6.N.6	Understand the concept of rate	20-27, 42-44 Quick Review Math Handbook Book 1 274, 290 #13
6.N.7	Express equivalent ratios as a proportion	284-287, 300-307, 316-319
6.N.8	Distinguish the difference between rate and ratio	42-44 Quick Review Math Handbook Book 1 274
6.N.9	Solve proportions using equivalent fractions	284-287, 300-307, 316-319 Quick Review Math Handbook Book 1 275, 276 #6, #7, 277 #4-#6

Strands and Performance Indicators		Student Edition Pages
6.N.10	Verify the proportionality using the product of the means equals the product of the extremes	See Course 2: 40 Quick Review Math Handbook Book 1 275, 277 #4-#6 (defines terms)
6.N.11	Read, write, and identify percents of a whole (0% to 100%)	232-234, 265-266 Quick Review Math Handbook Book 1 144-147, 153
6.N.12	Solve percent problems involving percent, rate, and base	235-239, 241, 267-269 145-147, 153
6.N.13	Define absolute value and determine the absolute value of rational numbers (including positive and negative)	Opportunity to address the objective: 244 Quick Review Math Handbook Book 1 88, 89, 91 #31, #32, 93 #28-#31
6.N.14	Locate rational numbers on a number line (including positive and negative)	244-247, 250-251, 271, 273 Quick Review Math Handbook Book 1 88, 89, 141
6.N.15	Order rational numbers (including positive and negative)	244 Quick Review Math Handbook Book 1 71, 73 #9, 110, 111 #13-#17, 130, 131 #10-#13, 163 #18
<i>Students will understand meanings of operations and procedures, and how they relate to one another.</i>		
Operations		
6.N.16	Add and subtract fractions with unlike denominators	109, 118-121, 123, 125-127, 151-155 Quick Review Math Handbook Book 1 113-114, 119, 162 #6
6.N.17	Multiply and divide fractions with unlike denominators	130-135, 140-141, 156-158, 161 Quick Review Math Handbook Book 1 120-121, 123, 125
6.N.18	Add, subtract, multiply, and divide mixed numbers with unlike denominators	123-127, 135, 137-139, 153-155, 158-161 Quick Review Math Handbook Book 1 115, 116, 119, 122-123, 124, 125, 162
6.N.19	Identify the multiplicative inverse (reciprocal) of a number	See Course 3: 243 Quick Review Math Handbook Book 1 42, 122, 125 #6-#11

Strands and Performance Indicators		Student Edition Pages
6.N.20	Represent fractions as terminating or repeating decimals	210-213, 228, 256-257, 264 <i>Quick Review Math Handbook Book 1</i> 159, 161 #19-#21
6.N.21	Find multiple representations of rational numbers (fractions, decimals, and percents 0 to 100)	110-113, 122, 149, 153, 210-213, 228, 232-234, 238, 256-257, 264-266, 268, 319 <i>Quick Review Math Handbook Book 1</i> 154-160, 161, 163
6.N.22	Evaluate numerical expressions using order of operations (may include exponents of two and three)	102-104, 145-146 <i>Quick Review Math Handbook Book 1</i> 78, 79
6.N.23	Represent repeated multiplication in exponential form	See Course 2: 106-107 <i>Quick Review Math Handbook Book 1</i> 168-171, 173, 174
6.N.24	Represent exponential form as repeated multiplication	See Course 2: 106-107 <i>Quick Review Math Handbook Book 1</i> 168, 173, 178
6.N.25	Evaluate expressions having exponents where the power is an exponent of one, two, or three	70-79, 88-91 <i>Quick Review Math Handbook Book 1</i> 168, 169, 170, 173, 178
<i>Students will compute accurately and make reasonable estimates.</i>		
Estimation		
6.N.26	Estimate a percent of quantity (0% to 100%)	234, 236, 266-267 <i>Quick Review Math Handbook Book 1</i> 141-142, 143, 151
6.N.27	Justify the reasonableness of answers using estimation (including rounding)	284-285, 294-295 <i>Quick Review Math Handbook Book 1</i> 72, 117, 119, 130, 133, 135-136, 138, 141, 142, 153
Strand Algebra		
<i>Students will represent and analyze algebraically a wide variety of problem solving situations.</i>		
Variables and Expressions		
6.A.1	Translate two-step verbal expressions into algebraic expressions	332-337, 357-359 <i>Quick Review Math Handbook Book 1</i> 258-259, 261 #17-#19
<i>Students will perform algebraic procedures accurately.</i>		
Variables and Expressions		
6.A.2*	Use substitution to evaluate algebraic expressions (may include Expressions exponents of one, two and three)	158, 229, 262, 264 <i>Quick Review Math Handbook Book 1</i> 270-273

Strands and Performance Indicators		Student Edition Pages
Equations and Inequalities		
6.A.3*	Translate two-step verbal sentences into algebraic equations	See Course 2: 204, 220-222 Quick Review Math Handbook Book 1 260, 261 #20-#22
6.A.4*	Solve and explain two-step equations involving whole numbers using inverse operations	See Course 2: 204-206, 208-209, 220-222 See Quick Review Math Handbook 2 285
6.A.5*	Solve simple proportions within context	237, 267 Quick Review Math Handbook Book 1 274-276, 277
6.A.6	Evaluate formulas for given input values (circumference, area, volume, distance, temperature, interest, etc.)	158, 229, 262, 264 Quick Review Math Handbook Book 1 152, 271, 272, 273 #8, #9, 341, 342, 344
Strand Geometry		
<i>Students will use visualization and spatial reasoning to analyze characteristics and properties of geometric shapes.</i>		
Shapes		
6.G.1	Calculate the length of corresponding sides of similar triangles, using proportional reasoning	Opportunity to address the objective: 282-283 Quick Review Math Handbook Book 1 369
6.G.2	Determine the area of triangles and quadrilaterals (squares, rectangles, rhombi, and trapezoids) and develop formulas	158, 182, 201, 262, 313 Quick Review Math Handbook Book 1 58, 294 #10, #11, 325-328, 329
6.G.3	Use a variety of strategies to find the area of regular and irregular polygons	182, 351, 364 Quick Review Math Handbook Book 1 324-328, 329, 347 #13, #14
6.G.4	Determine the volume of rectangular prisms by counting cubes and develop the formula	304-305 Quick Review Math Handbook Book 1 335, 339
6.G.5	Identify radius, diameter, chords and central angles of a circle	See Course 2: 294 Quick Review Math Handbook Book 1 17, 41, 340, 341-343, 345, 347
6.G.6	Understand the relationship between the diameter and radius of a circle	See Course 2: 310 Quick Review Math Handbook Book 1 340

Strands and Performance Indicators		Student Edition Pages
6.G.7	Determine the area and circumference of a circle, using the appropriate formula	294-295 <i>Quick Review Math Handbook Book 1</i> 341, 342, 344
6.G.8	Calculate the area of a sector of a circle, given the measure of a central angle and the radius of the circle	This indicator is outside the scope of the course.
6.G.9	Understand the relationship between the circumference and the diameter of a circle	See Course 2: 294-295, 310 <i>Quick Review Math Handbook Book 1</i> 341-342
<i>Students will apply coordinate geometry to analyze problem solving situations.</i>		
Coordinate Geometry		
6.G.10*	Identify and plot points in all four quadrants	340-341, 360 <i>Quick Review Math Handbook Book 1</i> 282-283, 284, 289
6.G.11*	Calculate the area of basic polygons drawn on a coordinate plane (rectangles and shapes composed of rectangles having sides with integer lengths)	182, 201, 350-351, 364
Strand Measurement		
<i>Students will determine what can be measured and how, using appropriate methods and formulas.</i>		
Units of Measurement		
6.M.1	Measure capacity and calculate volume of a rectangular prism	See Course 3: 104-105, 126 <i>Quick Review Math Handbook Book 1</i> 335, 339 #5
6.M.2	Identify customary units of capacity (cups, pints, quarts, and gallons)	This indicator is outside the scope of the course. <i>Quick Review Math Handbook Book 1</i> 352, 362
6.M.3	Identify equivalent customary units of capacity (cups to pints, pints to quarts, and quarts to gallons)	This indicator is outside the scope of the course. <i>Quick Review Math Handbook Book 1</i> 362, 363, 372 #16
6.M.4	Identify metric units of capacity (liter and milliliter)	This indicator is outside the scope of the course. <i>Quick Review Math Handbook Book 1</i> 362, 363, 372 #15
6.M.5	Identify equivalent metric units of capacity (milliliter to liter and liter to milliliter)	This indicator is outside the scope of the course. <i>Quick Review Math Handbook Book 1</i> 362, 363, 372 #15
Tools and Methods		
6.M.6	Determine the tool and technique to measure with an appropriate level of precision: capacity	284-285, 294-295 <i>Quick Review Math Handbook Book 1</i> 362, 363 #19

Strands and Performance Indicators		Student Edition Pages
<i>Students will develop strategies for estimating measurements.</i>		
Estimation		
6.M.7	Estimate volume, area, and circumference (see figures identified in geometry strand)	284-285, 294-295 Quick Review Math Handbook Book 1 324, 329 #1, 337, 338, 339, 341, 342, 344
6.M.8	Justify the reasonableness of estimates	284-285, 294-295 Quick Review Math Handbook Book 1 324, 345 #20
6.M.9	Determine personal references for capacity	This indicator is outside the scope of the course.
Strand Statistics and Probability		
<i>Students will collect, organize, display, and analyze data.</i>		
Collection of Data		
6.S.1*	Develop the concept of sampling when collecting data from a population and decide the best method to collect data for a particular question.	11, 19 Quick Review Math Handbook Book 1 184, 185, 200, 230 #1
Organization and Display of Data		
6.S.2*	Record data in a frequency table	6-11, 36-38 Quick Review Math Handbook Book 1 187, 188
6.S.3*	Construct Venn diagrams to sort data	See Course 2; 285 Quick Review Math Handbook Book 1 235 #27-#30, 245-247, 249 #26-#30
6.S.4*	Determine and justify the most appropriate graph to display a given set of data (pictograph, bar graph, line graph, histogram, or circle graph)	Opportunity to address the objective: 6-27, 39-44 Quick Review Math Handbook Book 1 182, 192-193, 195, 199, 200, 230
Analysis of Data		
6.S.5	Determine the mean, mode and median for a given set of data	6-9, 11, 19, 22-24, 36-38 Quick Review Math Handbook Book 1 136, 183 #9, 204-207, 209, 231 <i>Handbook Book 1</i>
6.S.6	Determine the range for a given set of data	6-7, 35 Quick Review Math Handbook Book 1 183 #8, 208, 209, 230 #6
6.S.7	Read and interpret graphs	16-17m 22-27, 39-44 Quick Review Math Handbook Book 1 182 #3-#5, 190-200, 202-203

Strands and Performance Indicators		Student Edition Pages
<i>Students will make predictions that are based upon data analysis.</i>		
Predictions from Data		
6.S.8	Justify predictions made from data	25, 27, 43, 265 Quick Review Math Handbook Book 1 198 #22, 202-203
<i>Students will understand and apply concepts of probability.</i>		
Probability		
6.S.9*	List possible outcomes for compound events	See Course 2: 66-67, 69, 86-87 Quick Review Math Handbook Book 1 226-227
6.S.10*	Determine the probability of dependent events	See Course 2: 66-69, 86-87 Quick Review Math Handbook Book 1 226-227
6.S.11*	Determine the number of possible outcomes for a compound event by using the fundamental counting principle and use this to determine the probabilities of events when the outcomes have equal probability	See Course 3: 29, 43

*Indicator is not tested on the Grade 6 Test.

SS = Study Skills Feature, PS = Prerequisite Skill Appendix (pp. 554-563)