



RHODE ISLAND
TSNE Mathematics Grade Level Expectations – Grades 6, 7, 8
Impact Mathematics: Algebra and More
Courses 1 and 2 © 2004 and Course 3 © 2001

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
Grade 6			
Number and Operations			
M–N&O–6–1 Demonstrates conceptual understanding of rational numbers with respect to ratios (comparison of two whole numbers by division a/b , $a : b$, and $a \div b$, where $b \neq 0$); equivalence across number formats; and rates (e.g., a out of b , 25%) using models, explanations, or other representations. (IMPORTANT: <i>Conditions for use of area, set, and linear models at grade 5 apply to all other grades</i>)	SE: 97-98, 99-101 TG: SA T97, T101	SE: 562-565, 566-567, 568-571, 572-574, 575-584 TG: I T566, T572	SE: 202 #1-#10, 210 #12 <i>Think & Discuss</i> 200 TG: TD T200

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
M–N&O–6–2 Demonstrates understanding of the relative magnitude of numbers by ordering or comparing numbers with whole number bases and whole number exponents, integers, or rational numbers within number formats; and comparing multiples of 10% and 25% up to and including 100% across number formats using number lines or equality and inequality symbols.	SE: 102-103, 106-110, 107 #22-#29, 120-122, 124 #24-#26, 144-145 TG: SS T103, T122 TD T103, T144	SE: 218, 239 #50, 675 #12-#13 <i>Think & Discuss</i> 219	SE: 224 #19 <i>Remember</i> 118, 227 TG: D T151
M–N&O–6–3 Demonstrates understanding of mathematical operations by describing or illustrating the meaning of a power by showing the relationship between the base (whole number) and the exponent (whole number); and the effect on the magnitude of a whole number when multiplying or dividing it by a whole number, decimal, or fraction.	SE: 115 #1, 116 #1, 207-209, 210-212 <i>Just the Facts</i> 115 <i>Remember</i> 420 TG: AM T116 T T206	SE: 15 #9-#12, 16 #2-#6, 25 #22, 583 #39 TG: TD T15	SE: 146-148, 149-152, 153- 155, 156-158, 162 #4-#13, 163 #14, 164 #23-#31 TG: D T151 SS T149
M–N&O–6–4 Accurately solves problems involving single or multiple operations on fractions (proper, improper, and mixed) or decimals; and addition or subtraction of integers; percent of a whole; or problems involving greatest common factor or least common multiple. (IMPORTANT: <i>Applies the conventions of order of operations with and without parentheses.</i>)	SE: 154-156, 157-160, 161- 163, 164-165, 166-170, 172-174, 175-177 TG: AL T156, T157, T158	SE: 222-225, 226-227, 228- 230, 234-235, 236-241, 562-565, 566-567, 568- 571, 572-574, 575-584	SE: 312 #12, 412 #2-#9, 413 #2-#4, 414 #1

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
Geometry and Measurement			
M–G&M–6–1 Uses properties or attributes of angles (right, acute, or obtuse) or sides (number of congruent sides, parallelism, or perpendicularity) to identify, describe, classify, or distinguish among different types of triangles (right, acute, obtuse, equiangular, scalene, isosceles, or equilateral) or quadrilaterals (rectangles, squares, rhombi, trapezoids, or parallelograms).	SE: 43, 515, 532 #20–#21, 546 #11	SE: 122 #3–#4, 475, 516 #8 <i>Explore 129</i>	SE: 76 #1–#4, 77 #5–#6, 290 #1, 291 #2, 297 #1–#4 <i>Just the Facts 77</i>
M–G&M–6–3 Uses properties or attributes (shape of bases, number of lateral faces, number of bases, number of edges, or number of vertices) to identify, compare, or describe three-dimensional shapes (rectangular prisms, triangular prisms, cylinders, spheres, pyramids, or cones).	SE: 58-60 TG: AL T59 SA T59	SE: 109 TG: TD T109	SE: 299 #13, 465 #36 <i>Remember 311</i>
M–G&M–6–5 Demonstrates conceptual understanding of similarity by describing the proportional effect on the linear dimensions of polygons or circles when scaling up or down while preserving the angles of polygons, or by solving related problems (including applying scales on maps). Describes effects using models or ^{sc} explanations.	SE: 152	SE: 482-484, 485-488, 489-491, 492 #1–#4, 494 #10 TG: AL T487 AM T486	SE: 206 #58, 280 #33–#38, 329-333

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
M–G&M–6–6 Demonstrates conceptual understanding of perimeter of polygons, and the area of quadrilaterals, or triangles through models, manipulatives, formulas, or solving problems; or the area of polygons or irregular figures on grids, and demonstrates understanding of the relationships of circle measures (radius to diameter and diameter to circumference) by solving related problems. Expresses all measures using appropriate units.	SE: 482-485, 486-489, 514-517, 518-521, 525-527, 528-533, 537 TG: AL T484 SA T483	SE: 39 #5, 120 #3-#4, 122 #3, 132, 487 #1, 488 #2, 489 #1, 492, 636 #6 <i>Remember 143</i>	SE: 22 #13, 23 #22-#23, 188 #24-#25, 441 #33-#34, 452 #34, 464 #25, 479 #6, 533 #36 <i>Remember 280</i>
M–G&M–6–7 Selects or uses appropriate systems of measure (English and metric) to determine length, time, capacity, mass, weight, temperature, or degrees of angles; or makes conversions within systems in problem situations. Benchmarks in Development	SE: 117-119, 125 #30, 209 #4, 213 #3-#8	SE: 98-99, 135 #3-#4, 301-302, 314 #2, 317 #7, 318 #10, 539 #48 <i>Chapter Summary 141</i> <i>Lab Investigation 119</i> TG: SA T452	This objective can be met in Glencoe's <i>Impact Mathematics: Algebra and More Course 2</i> © 2004 on pages 98-99, 135 #3-#4, 301-302, 314 #2, 317 #7, 318 #10, and 539 #48.

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
Functions and Algebra			
M-F&A-6-1 Identifies and extends to specific cases a variety of patterns (linear and nonlinear) represented in models, tables, sequences, graphs, or in problem situations; or writes a rule in words or symbols for finding specific cases of a linear relationship; or writes a rule in words or ^{sc} symbols for finding specific cases of a nonlinear relationship; and writes an expression or ^{sc} equation using words or ^{sc} symbols to express the generalization of a linear relationship (e.g., twice the term number plus 1 or ^{sc} $2n + 1$).	SE: 278, 436-438, 439-442, 443 #1b, 444 #4 TG: AL T437	SE: 245 #1-#4, 345-347, 348-350, 351-353, 365-367, 368-370, 644-647, 648-649, 652-658 <i>Think & Discuss</i> 281	SE: 51-55, 61 #27, 62 #28, 74-75, 76-77, 78-79 TG: SA T77
M-F&A-6-2 Demonstrates conceptual understanding of linear relationships ($y = kx$; $y = mx + b$) as a constant rate of change by constructing or interpreting graphs of real occurrences and describing the slope of linear relationships (faster, slower, greater, or smaller) in a variety of problem situations; and describes how change in the value of one variable relates to change in the value of a second variable in problem situations with constant rates of change.	SE: <i>Share & Summarize</i> 291 TG: T T291	SE: 321-325, 326-327, 328-329 TG: SA T326 TD T326	SE: 24-28, 29-30, 34 #1-#6, 35 #7, 41 #29-#30, 42 #30 TG: AL T31 AM T26 SA T25

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
M-F&A-6-3 Demonstrates conceptual understanding of algebraic expressions by using letters to represent unknown quantities to write linear algebraic expressions involving any of the four operations and consistent with order of operations expected at this grade level; or by evaluating linear algebraic expressions (including those with more than one variable); or by evaluating an expression within an equation (e.g., determine the value of y when $x = 4$ given $y = 3x - 2$).	SE: 436-438, 439-442, 443 #1b, 444 #4 TG: AL T437	SE: 21 #1, 23 #8a, 24 #10, 25 #27a, 26 #34b, 28 #41, 34-36, 46 #2a, 50 #18 <i>Share & Summarize</i> 18	SE: 358-361, 362-365, 368-369, 629 #23-#25 TG: SA T360, T361, T363 T T365
M-F&A-6-4 Demonstrates conceptual understanding of equality by showing equivalence between two expressions using models or different representations of the expressions (expressions consistent with the parameters of M-F&A-6-3), solving multi-step linear equations of the form $ax \pm b = c$, where a , b , and c are whole numbers with $a \neq 0$.	SE: 556-557, 563-564, 567 #27-#28, 568 #29-#31, 571-573, 574-575, 576-578, 579-583 TG: T T573 TD T570	SE: 385-387, 392 #1-#7, 395-397, 410-411, 412, 413-414, 415-417, 419-421, 428 #12-#15, 430 #32-#41	SE: 217-218, 223 #1-#9, 225 #22 <i>Think & Discuss</i> 216 TG: TD T216

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
Data, Statistics, and Probability			
M–DSP–6–1 Interprets a given representation (circle graphs, line graphs, or stem-and-leaf plots) to answer questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems. (IMPORTANT: <i>Analyzes data consistent with concepts and skills in M–DSP–6–2.</i>)	SE: 230-233, 245 #34, 282-285, 286-291, 343-345, 346-349, 350-352, 353-360, 361 #23 TG: T T349	SE: 610-615, 616-622, 645-647, 652-659, 675 #14, 709, 710-713, 714-717, 718-722	SE: 352 #18, 410 #36, 537 #60, 540 #6
M–DSP–6–2 Analyzes patterns, trends or distributions in data in a variety of contexts by determining or using measures of central tendency (mean, median, or mode) or dispersion (range or variation) to analyze situations, or to solve problems.	SE: 362-365, 368 #3, 369 #1c, 370-372, 373-376, 380-388 <i>Share & Summarize</i> 379 TG: AL T365, T375 SS T372	SE: 703 #11a, 711 #3-#4, 713 #2, 719 #3a, 720 #9a-#9b, 721 #10b-#10d, 727 #5e	SE: 45 #46b, 53 #2a, 338 #20, 537 #60 <i>Remember</i> 45, 53
M–DSP–6–4 Uses counting techniques to solve problems in context involving combinations or simple permutations using a variety of strategies (e.g., organized lists, tables, tree diagrams, models, Fundamental Counting Principle, or ^{sc} others).	SE: 640-641, 642 #1-#5, 644 #1-#3, 645 #4-#6, 646 #3b TG: T T642	SE: 666-667, 668-669, 670, 672 #2a, 673 #4a, 674 #7a TG: T T668	SE: 545-546, 547-549, 550-553, 554-557, 558-563 TG: AL T546 AM T549 SA T545, T553 TD T551
M–DSP–6–5 For a probability event in which the sample space may or may not contain equally likely outcomes, determines the experimental or theoretical probability of a simple event in a problem-solving situation.	SE: 613-614, 622 #3, 625 #2, 628 #1-#4, 631-636, 639 #3, 641 #5, 644 #1-#3, 645 #5, 646-650	SE: 676-677, 678-679, 680-682, 683-685, 686-690, 693 #1, 694 #2, 700-701 <i>Explore</i> 692	SE: 372 #46, 482 #25, 582-584, 585-586

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
Grade 7			
Number and Operations			
M–N&O–7–1 Demonstrates conceptual understanding of rational numbers with respect to equivalent representations across number formats (e.g., $\frac{1}{2}$, 0.5, 50%, 5×10^{-1}; 125%, 1.25); percents as a means of comparing the same or different parts of the whole when the wholes vary in magnitude (e.g., 8 girls in a classroom of 16 students compared to 8 girls in a classroom of 20 students, or 20% of 400 compared to 50% of 100); and percents as a way of expressing multiples of a number (e.g., 200% of 50) using models, explanations, or other representations.	SE: 97-98, 99-101 TG: SA T97, T101	SE: 562-565, 566-567, 568-571, 572-574, 575-584 TG: I T566, T572	SE: 202 #1-#10, 210 #12 <i>Think & Discuss</i> 200 TG: TD T200
M–N&O–7–2 Demonstrates understanding of the relative magnitude of numbers by ordering or comparing rational numbers across number formats, numbers with whole number bases and whole number exponents, integers, absolute values, or numbers represented in scientific notation using number lines or equality and inequality symbols.	SE: 102-103, 106, 107 #22-#29, 108-110, 120-122, 124 #24-#26, 144-145 TG: SS T103, T122 TD T103, T 144	SE: 218, 239 #50, 675 #12-#13 <i>Think & Discuss</i> 219	SE: 224 #19 <i>Remember</i> 118, 227 TG: D T151

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
M–N&O–7–4 Accurately solves problems involving proportional reasoning; percents involving discounts, tax, or tips; and rates. (IMPORTANT: <i>Applies the conventions of order of operations including parentheses, brackets, or exponents.</i>)	SE: 154-156, 157-160, 161-163, 164-165, 166-170, 172-174, 175-177 TG: AL T156, T157, T158	SE: 222-225, 226-227, 228-230, 234-235, 236-241, 562-565, 566-567, 568-571, 572-574, 575-584	SE: 312 #12, 412 #2-#9, 413 #2-#4, 414 #1
Geometry and Measurement			
M–G&M–7–1 Uses properties of angle relationships resulting from two or three intersecting lines (adjacent angles, vertical angles, or angle relationships formed by two non-parallel lines cut by a transversal), or two parallel lines cut by a transversal to solve problems.	SE: 472-473	This objective can be met in Glencoe's <i>Impact Mathematics: Algebra and More Course 1</i> © 2004 pages 472-473 Also see Glencoe's <i>Geometry</i> © 2005 pages 37-43.	This objective can be met in Glencoe's <i>Impact Mathematics: Algebra and More Course 1</i> © 2004 pages 472-473 Also see Glencoe's <i>Geometry</i> © 2005 pages 37-43.
M–G&M–7–2 Applies theorems or relationships (triangle inequality or sum of the measures of interior angles of regular polygons) to solve problems.	SE: 473-476, 479 #24 <i>Think & Discuss</i> 56 TG: SA T56, T473 TD T474	TG: AL T472	SE: 510 #27
M–G&M–7–4 Applies the concepts of congruency by solving problems on a coordinate plane involving reflections, translations, or rotations.	This objective is met in Glencoe's <i>Impact Mathematics: Algebra and More Course 2</i> © 2004 pages 259-262.	SE: 259-262	SE: 339-342, 343-345, 346-351

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
M–G&M–7–5 Applies concepts of similarity by solving problems involving scaling up or down and their impact on angle measures, linear dimensions and areas of polygons, and circles when the linear dimensions are multiplied by a constant factor. Describes effects using models or ^{sc} explanations.	SE: 152	SE: 482-484, 485-488, 489-491, 492 #1-#4, 494 #10 TG: AL T487 AM T486	SE: 206 #58, 280 #33-#38, 329-333
M–G&M–7–6 Demonstrates conceptual understanding of the area of circles or the area or perimeter of composite figures (quadrilaterals, triangles, or parts of circles), and the surface area of rectangular prisms, or volume of rectangular prisms or cylinders using models, formulas, or by solving related problems. Expresses all measures using appropriate units.	SE: 522-524, 534 #24b, 590 #2, 597 #29	SE: 121 #6, 482-484, 485-488, 489-491, 492-495	SE: 22 #13, 62 #30, 63 #32, 78 #1, 255 #23-#24, 280 #31-#32, 338 #21-#22, 452 #34, 502-503, 535 #46

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
Functions and Algebra			
M-F&A-7-1 Identifies and extends to specific cases a variety of patterns (linear and nonlinear) represented in models, tables, sequences, graphs, or in problem situations; and generalizes a linear relationship using words and symbols; generalizes a linear relationship to find a specific case; or writes an expression or ^{sc} equation using words or ^{sc} symbols to express the generalization of a nonlinear relationship.	SE: 278, 436-438, 439-442, 443 #1b, 444 #4 TG: AL T437	SE: 245 #1-#4, 345-347, 348-350, 351-353, 365-367, 368-370, 644-647, 648-649, 652-658 <i>Think & Discuss</i> 281	SE: 51-55, 61 #27, 62 #28, 74-75, 76-77, 78-79 TG: SA T77
M-F&A-7-2 Demonstrates conceptual understanding of linear relationships ($y = kx$; $y = mx + b$) as a constant rate of change by solving problems involving the relationship between slope and rate of change, by describing the meaning of slope in concrete situations, or informally determining the slope of a line from a table or graph; and distinguishes between constant and varying rates of change in concrete situations represented in tables or graphs; or describes how change in the value of one variable relates to change in the value of a second variable in problem situations with constant and varying rates of change.	SE: <i>Share & Summarize</i> 291 TG: T T291	SE: 321-325, 326-327, 328-329 TG: SA T326 TD T326	SE: 24-28, 29-30, 34 #1-#6, 35 #7, 41 #29-#30, 42 #30 TG: AL T31 AM T26 SA T25

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
M-F&A-7-3 Demonstrates conceptual understanding of algebraic expressions by using letters to represent unknown quantities to write algebraic expressions (including those with whole number exponents or more than one variable); or by evaluating algebraic expressions (including those with whole number exponents or more than one variable); or by evaluating an expression within an equation (e.g., determine the value of y when $x = 4$ given $y = 5x^3 - 2$).	SE: 436-438, 439-442, 443 #1b, 444 #4 TG: AL T437	SE: 21 #1, 23 #8a, 24 #10, 25 #27a, 26 #34b, 28 #41, 34-36, 46 #2a, 50 #18 <i>Share & Summarize</i> 18	SE: 358-361, 362-365, 368-369, 629 #23-#25 TG: SA T360, T361, T363 T T365
M-F&A-7-4 Demonstrates conceptual understanding of equality by showing equivalence between two expressions (expressions consistent with the parameters of the left- and right-hand sides of the equations being solved at this grade level) using models or different representations of the expressions, solving multi-step linear equations of the form $ax \pm b = c$ with $a \neq 0$, $ax \pm b = cx \pm d$ with $a, c \neq 0$, and $(x/a) \pm b = c$ with $a \neq 0$, where a, b, c and d are whole numbers; or by translating a problem-solving situation into an equation consistent with the parameters of the type of equations being solved for this grade level.	SE: 556-557, 563-564, 567 #27-#28, 568 #29-#31, 571-573, 574-575, 576-578, 579-583 TG: T T573 TD T570	SE: 385-387, 392 #1-#7, 395-397, 410-411, 412, 413-414, 415-417, 419-421, 428 #12-#15, 430 #32-#41	SE: 217-218, 223 #1-#9, 225 #22 <i>Think & Discuss</i> 216 TG: TD T216

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
Data, Statistics, and Probability			
M–DSP–7–1 Interprets a given representation (circle graphs, scatter plots that represent discrete linear relationships, or histograms) to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems. (IMPORTANT: <i>Analyzes data consistent with concepts and skills in M–DSP–7–2.</i>)	SE: 230-233, 245 #34, 282-285, 286-291, 343-345, 346-349, 350-352, 353-360, 361 #23 TG: T T349	SE: 610-615, 616-622, 645-647, 652-659, 675 #14, 709, 710-713, 714-717, 718-722	SE: 352 #18, 410 #36, 537 #60, 540 #6
M–DSP–7–2 Analyzes patterns, trends, or distributions in data in a variety of contexts by solving problems using measures of central tendency (mean, median, or mode), dispersion (range or variation), or outliers limited to graphs, tables of values, and lists of data to analyze situations to determine their effect on mean, median, or mode; and evaluates the sample from which the statistics were developed (bias).	SE: 362-365, 368 #3, 369 #1c, 370-372, 373-376, 380-388 <i>Share & Summarize</i> 379 TG: AL T365, T375 SS T372	SE: 703 #11a, 711 #3-#4, 713 #2, 719 #3a, 720 #9a-#9b, 721 #10b-#10d, 727 #5e	SE: 45 #46b, 53 #2a, 338 #20, 537 #60 <i>Remember</i> 45, 53

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
M–DSP–7–3 Organizes and displays data using line graphs or histograms to answer questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems; or identifies representations or elements of representations that best display a given set of data or situation, consistent with the representations required in M–DSP–7–1. (IMPORTANT: <i>Analyzes data consistent with concepts and skills in M–DSP–7–2.</i>)	SE: 230-233, 245 #34, 350-352 TG: SA T346	SE: 675 #14, 709, 710-713, 715 #3b, 716 #2, 718-722	SE: 51-55, 66 #13, 603 #1, 605-607, 618 #6, 629 #19, 632 #1, 633 #1 <i>Share & Summarize</i> 604, 612
M–DSP–7–5 For a probability event in which the sample space may or may not contain equally likely outcomes, determines the experimental or theoretical probability of a simple event or a compound event in a problem-solving situation.	SE: 613-614, 622 #3, 625 #2, 628 #1-#4, 631-636, 639 #3, 641 #5, 644 #1-#3, 645 #5, 646-650	SE: 676-677, 678-679, 680-682, 683-685, 686-690, 693 #1, 694 #2, 700-701 <i>Explore</i> 692	SE: 372 #46, 482 #25, 582-584, 585-586
Grade 8			
Number and Operations			
M–N&O–8–1 Demonstrates conceptual understanding of rational numbers with respect to percents as a way of describing change (percent increase and decrease) using explanations, models, or other representations.	SE: 226-229, 234-235, 236-239, 240-246	SE: 568-571, 576 #20-#21, 577 #22 TG: AL T571 AM T570 I T568 SA T571	SE: <i>Remember</i> 617

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
M–N&O–8–2 Demonstrates understanding of the relative magnitude of numbers by ordering or comparing rational numbers, common irrational numbers ($\sqrt{2}$, and π), numbers with whole number or fractional bases and whole number exponents, square roots, absolute values, integers, or numbers represented in scientific notation using number lines or equality and inequality symbols.	SE: 102-103, 106, 107 #22-#29, 108-110, 120-122, 124 #24-#26, 144-145 TG: SS T103, T122 TD T103, T144	SE: 218, 239 #50, 675 #12-#13 <i>Think & Discuss</i> 219	SE: 224 #19 <i>Remember</i> 118, 227 TG: D T151
M–N&O–8–4 Accurately solves problems involving proportional reasoning (percent increase or decrease, interest rates, markups, or rates); and squares, cubes and taking square or cube roots. (IMPORTANT: <i>Applies the conventions of order of operations.</i>)	SE: 226-229, 234-235, 236-239, 240-246	SE: 568-571, 576 #20-#21, 577 #22 TG: AL T571 AM T570 E T271 I T568 SA T571	SE: 7, 64, 113 <i>Remember</i> 617
Geometry and Measurement			
M–G&M–8–2 Applies the Pythagorean Theorem to find a missing side of a right triangle, or in problem-solving situations.	SE: 536-539, 540-543, 548 #8 TG: AM T538 T T543	SE: 271-272, 275 #2, 276 #2-#6 <i>Remember</i> 418 TG: AL T272 T T272	SE: 63 #31, 205 #53 <i>Remember</i> 202

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
M–G&M–8–5 Applies concepts of similarity to determine the impact of scaling on the volume or surface area of three-dimensional figures when linear dimensions are multiplied by a constant factor; to determine the length of sides of similar triangles, or to solve problems involving growth and rate.	This objective is met in Glencoe’s <i>Impact Mathematics: Algebra and More Course 2</i> © 2004 pages 497-498, 499-500, 501-504, 505, and 506-513.	SE: 497-498, 499-500, 501-504, 505, 506-513 TG: SA T498 TT T499	This objective is met in Glencoe’s <i>Impact Mathematics: Algebra and More Course 2</i> © 2004 pages 497-498, 499-500, 501-504, 505, and 506-513.
M–G&M–8–6 Demonstrates conceptual understanding of surface area or volume by solving problems involving surface area and volume of rectangular prisms, cylinders, or pyramids. Expresses all measures using appropriate units.	SE: 522-524, 534 #24b, 590 #2, 597 #29	SE: 98-99, 103 #8-#11, 109-111, 112-114, 115, 116-118, 119-121, 122-126, 132-134 TG: SA T99	SE: 22 #13, 62 #30, 63 #32, 78 #1, 255 #23-#24, 280 #31-#32, 338 #21-#22, 452 #34, 502-503, 535 #46
Functions and Algebra			
M–F&A–8–1 Identifies and extends to specific cases a variety of patterns (linear and nonlinear) represented in models, tables, sequences, graphs, or in problem situations; and generalizes a linear relationship (non-recursive explicit equation); generalizes a linear relationship to find a specific case; generalizes a nonlinear relationship using words or ^{sc} symbols; or generalizes a common nonlinear relationship to find a specific case.	SE: 278, 436-438, 439-442, 443 #1b, 444 #4 TG: AL T437	SE: 245 #1-#4, 345-347, 348-350, 351-353, 365-367, 368-370, 644-647, 648-649, 652-658 <i>Think & Discuss</i> 281	SE: 51-55, 61 #27, 62 #28, 74-75, 76-77, 78-79 TG: SA T77

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
M-F&A-8-2 Demonstrates conceptual understanding of linear relationships ($y = kx$; $y = mx + b$) as a constant rate of change by solving problems involving the relationship between slope and rate of change; informally and formally determining slopes and intercepts represented in graphs, tables, or problem situations; or describing the meaning of slope and intercept in context; and distinguishes between linear relationships (constant rates of change) and nonlinear relationships (varying rates of change) represented in tables, graphs, equations, or problem situations; or describes how change in the value of one variable relates to change in the value of a second variable in problem situations with constant and varying rates of change.	SE: <i>Share & Summarize</i> 291 TG: T T291	SE: 321-325, 326-327, 328-329 TG: SA T326 TD T326	SE: 24-28, 29-30, 34 #1-#6, 35 #7, 41 #29-#30, 42 #30 TG: AL T31 AM T26 SA T25

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
M-F&A-8-3 Demonstrates conceptual understanding of algebraic expressions by evaluating and simplifying algebraic expressions (including those with square roots, whole number exponents, or rational numbers); or by evaluating an expression within an equation (e.g., determine the value of y when $x = 4$ given $y = 7\sqrt{x} + 2x$).	SE: 436-438, 439-442, 443 #1b, 444 #4 TG: AL T437	SE: 21 #1, 23 #8a, 24 #10, 25 #27a, 26 #34b, 28 #41, 34-36, 46 #2a, 50 #18 <i>Share & Summarize</i> 18	SE: 358-361, 362-365, 368-369, 629 #23-#25 TG: SA T360, T361, T363 T T365
M-F&A-8-4 Demonstrates conceptual understanding of equality by showing equivalence between two expressions (expressions consistent with the parameters of the left- and right-hand sides of the equations being solved at this grade level) using models or different representations of the expressions, solving formulas for a variable requiring one transformation (e.g., $d = rt$; $d/r = t$); by solving multi-step linear equations with integer coefficients; by showing that two expressions are or are not equivalent by applying commutative, associative, or distributive properties, order of operations, or substitution; and by informally solving problems involving systems of linear equations in a context.	SE: 556-557, 563-564, 567 #27-#28, 568 #29-#31, 571-573, 574-575, 576-578, 579-583 TG: T T573 TD T570	SE: 385-387, 392 #1-#7, 395-397, 410-411, 412, 413-414, 415-417, 419-421, 428 #12-#15, 430 #32-#41	SE: 217-218, 223 #1-#9, 225 #22 <i>Think & Discuss</i> 216 TG: TD T216

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
Data, Statistics, and Probability			
M–DSP–8–1 Interprets a given representation (line graphs, scatter plots, histograms, or box-and-whisker plots) to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems. (IMPORTANT: <i>Analyzes data consistent with concepts and skills in M–DSP–8–2.</i>)	SE: 230-233, 245 #34, 282-285, 286-291, 343-345, 346-349, 350-352, 353-360, 361 #23 TG: T T349	SE: 610-615, 616-622, 645-647, 652-659, 675 #14, 709, 710-713, 714-717, 718-722	SE: 352 #18, 410 #36, 537 #60, 540 #6
M–DSP–8–2 Analyzes patterns, trends, or distributions in data in a variety of contexts by determining or using measures of central tendency (mean, median, or mode), dispersion (range or variation), outliers, quartile values, or estimated line of best fit to analyze situations, or to solve problems; and evaluates the sample from which the statistics were developed (bias, random, or non-random).	SE: 362-365, 368 #3, 369 #1c, 370-372, 373-376, 380-388 <i>Share & Summarize</i> 379 TG: AL T365, T375 SS T372	SE: 703 #11a, 711 #3-#4, 713 #2, 719 #3a, 720 #9a-#9b, 721 #10b-#10d, 727 #5e	SE: 45 #46b, 53 #2a, 338 #20, 537 #60 <i>Remember</i> 45, 53

OBJECTIVES	PAGE REFERENCES		
	COURSE 1	COURSE 2	COURSE 3
<p>M–DSP–8–3 Organizes and displays data using scatter plots to answer questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems; or identifies representations or elements of representations that best display a given set of data or situation, consistent with the representations required in M–DSP–8–1. (IMPORTANT: <i>Analyzes data consistent with concepts and skills in M–DSP–8–2.</i>)</p>	<p>SE: 230-233, 245 #34, 350-352 TG: SA T346</p>	<p>SE: 675 #14, 709, 710-713, 715 #3b, 716 #2, 718-722</p>	<p>SE: 51-55, 66 #13, 603 #1, 605-607, 618 #6, 629 #19, 632 #1, 633 #1 <i>Share & Summarize</i> 604, 612</p>
<p>M–DSP–8–4 Uses counting techniques to solve problems in context involving combinations or permutations using a variety of strategies (e.g., organized lists, tables, tree diagrams, models, Fundamental Counting Principle, or^{sc} others).</p>	<p>SE: 640-641, 642 #1-#5, 644 #1-#3, 645 #4 #6, 646 #3b TG: T T642</p>	<p>SE: 666-667, 668-669, 670, 672 #2a, 673 #4a, 674 #7a TG: T T668</p>	<p>SE: 545-546, 547-549, 550-553, 554-557, 558-563 TG: AL T546 AM T549 SA T545, T553 TD T551</p>

Codes Used for TG Codes

Course 1

AL	Access for All Learners
AM	About the Mathematics
SA	On the Spot Assessment
SS	Share & Summarize
T	Troubleshooting
TD	Think and Discuss

Course 2

AL	Access for All Learners
AM	About the Mathematics
E	Example
I	Investigation
SA	On the Spot Assessment
T	Troubleshooting
TD	Think and Discuss
TT	Tips from Teachers

Course 3

AL	Access for All Learners
AM	About the Mathematics
D	Develop
SA	On the Spot Assessment
SS	Share & Summarize
T	Troubleshooting
TD	Think and Discuss