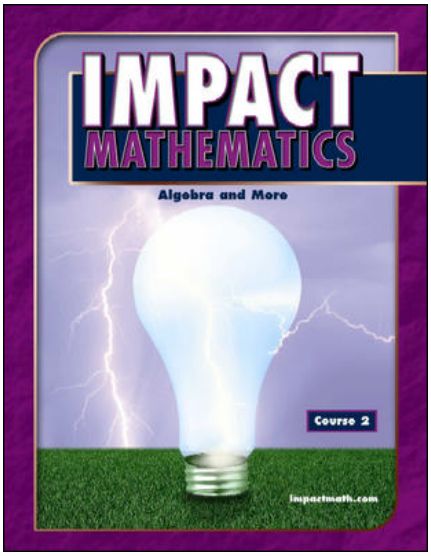
Mc Graw Hill Glencoe

Mastery Test – Fourth Generation
Mathematics Grade 7 Content

Connecticut



IMPACT MATHEMATICS

Algebra and More

Course 2

STANDARDS	PAGE REFERENCES
1. Place Value	
A. Solve problems involving 0.1 MORE/LESS or 0.01 MORE/LESS than a given number.	**Student Edition:** 11 #2, 48 #12, 117 #4, 140 #36, 232-233, 251 #40, #41, 614-615 **Teacher's Guide:** T232, T233
B. Identify alternative forms of expressing whole numbers and decimals using expanded notation.	**Student Edition:** 64, 191 #4, 192-195, 197, 198, 342 #46-#48, 418 #49 **Teacher's Guide:** T197
C. Identify alternative forms of expressing numbers using scientific notation.	**Student Edition:** 196-199, 200-202, 208, 215 #29-#31, 286-287, 289, 291, 342 #46, #48, 407 #22-#24, 469 #37, #38 *Remember* 287 **Teacher's Guide:** T197, T202, T287
2. Pictorial Representation of Numbers	
A. Relate fractions, mixed numbers, decimals and percents to their pictorial representations and vice versa.	**Student Edition:** 73 #74, 140 #36, 311 #6, 533, 567, 576 #20, #21, 675 #14, 699, 706 **Teacher's Guide:** T567

STANDARDS	PAGE REFERENCES
B. Identify and/or shade fractional parts of regions or sets, decimals and mixed numbers in pictures.	**Student Edition:** 140 #36, 311 #6, 373 #13, 533, 557 #13-#16, 562, 576, 593 #9f
3. Equivalent Fractions, Decimals and Percents	
A. Rename fractions and mixed numbers as equivalent decimals and vice versa.	**Student Edition:** 51, 126 #24, #25, 173 #37, 279 #28, 418 #44, 496 #24
B. Rename fractions and decimals (up to 1.00) as equivalent percents and vice versa.	**Student Edition:** 51, 126, 173 #37, 279 #28, 418, 496 #24
4. Order, Magnitude and Rounding of Numbers	
A. Order whole numbers and decimals.	**Student Edition:** 30 #55, #56, 90 #22-#27, 175 #74-#77, 198 #15b, 208 #33b, 212 #71-#72, 340 #31, 418 #45, 603 **Teacher's Guide:** T198
B. Order fractions and decimals including mixed numbers in context.	**Student Edition:** 30 #56, 90 #22-#27, 198 #15b, 320 #13, #14, 418 #46, 496 #25, 603 #4-#6, 675 #12 **Teacher's Guide:** T198
C. Describe magnitude of whole numbers and decimals in and out of context.	**Student Edition:** 90 #24, 198-199, 208 #33b, 218-219, 225 #9, #10, 320 #13, #14, 339 #19, 418 #46, 591 #5, 603 #4, 630-631, 649, 657 *Remember* 239 **Teacher's Guide:** T191, T217a
D. Describe magnitude or order of fractions and mixed numbers in context.	**Student Edition:** 90 #22-#26, 185 #6, 496 #25, 603 #4-#6
E. Round whole numbers, fractions and decimals in context.	**Student Edition:** 140 #36, 316 #52, 318 #10, 327 #4, 495 #15, #16, 513, 630 #4 **Teacher's Guide:** T327
F. Locate points on number lines and scales, including fractions, mixed numbers, decimals and integers.	**Student Edition:** 222-227, 236-238, 320 #26, #27, 361 #30, #31, 495 #14, #15 **Teacher's Guide:** T222, T225, T227

STANDARDS	PAGE REFERENCES
5. Models for Operations	
A. Identify the appropriate operation or equation to solve a story problem.	**Student Edition:** 29 #45, 209 #40, 230 #5-#6, 273, 347 #3, 386 #1, 393 #18, 395, 415 #15, 420, 430 #42, 589 #1D, 675 #14a **Teacher's Guide:** T230, T395
B. Write a story problem from an equation.	**Student Edition:** 211 #62d, 244 #4, 396-397, 402 1b *Think & Discuss* 331 **Teacher's Guide:** T244, T331
6. Basic Facts	
Not tested	
7. Computation with Whole Numbers and Decimals	
A. Add and subtract 2-, 3- and 4-digit whole numbers, money amounts and decimals.	**Student Edition:** 33, 89 #15, 140 #24-#26, 163 #66, #69, 291 #77-#79, 292 #85, 429 #8-#13, 559 #23-#24
B. Multiply and divide 2- and 3-digit whole numbers, money amounts and decimals by 1-digit numbers and decimals (multiply only).	**Student Edition:** 30 #49-#51, 31 #67, 73 #56-#60, 90 #34-#37, 140 #21-#22, 211 #62, 214 #13, 252 #51, #52, #55, #56, 481 #35, #36, 558 #19, #20, 559 #25-#28, 561, 577 #23
C. Multiply and divide whole numbers and decimals by 10, 100 and 1,000.	**Student Edition:** 47 #10, 89 #16, 181-182, 192-194, 199, 211 #62, 486 #2, 493 #5, 557 #17, 683-685 **Teacher's Guide:** T182, T685
8. Computation with Fractions and Integers	
A. Add and subtract fractions and mixed numbers with reasonable and appropriate denominators.	**Student Edition:** 30 #57-#62, 90 #28-#33, 108 #44-#46, 163 #62, #64, #68, 360 #18-#20, 433 #54-#59, 469 #34-#36, 481 #26-#28
B. Multiply whole numbers and fractions by fractions and mixed numbers.	**Student Edition:** 108 #47-#52, 163 #63, #65, 433 #60-#62, 469 #31-#33

STANDARDS	PAGE REFERENCES
C. Add positive and negative integers (range -20 to 20).	**Student Edition:** 218-219, 222-224, 225-227, 230, 231-233, 236-238 **Teacher's Guide:** T222, T224, T225
9. Solve Word Problems	
A. Solve one-step story problems involving whole numbers, fractions, decimals and money amounts with or without extraneous information.	**Student Edition:** 15 #13, 16 #1, 39 #5c, 125 #11, 183 #3, 230 #5, 376 #29, 561 #43, 579 #29
B. Solve multistep problems involving fractions and mixed numbers with or without extraneous information.	**Student Edition:** 25 #27, 37-39, 185 #6, 187 #19a, 468, 508 #11, 581 #34, 582 #37, 586 #1 **Teacher's Guide:** T37
C. Solve multistep problems involving whole numbers, decimals, money amounts and mixed numbers, including means.	**Student Edition:** 31 #67, 47 #10, 50 #18, 88 #14, 128, 211 #62, 241 #80, 267 #20, 292 #85, 539 #49, 561 #43, 659 #21
D. Solve multistep problems involving whole numbers, decimals or money amounts, and explain how the solution was determined.	**Student Edition:** 31 #67, 39 #5, 139 #20, 211 #62, 430 #44, 509 #14, 536 #27, 655 #9, 658 #12
10. Numerical Estimation Strategies	
A. Identify the best expression to find an estimate.	**Student Edition:** 11 #3, 15 #13, 40 #1, 135, 268, 317 #6, 327 #4, 505 #1-#6, 591 #5, 637 #8
B. Identify whether and why a particular strategy will result in an overestimate or an underestimate.	**Student Edition:** 24 #10, 29 #42, 89 #17, 117 #4, 135, 188-189 #23, 505 #1-#6, 588-589, 591 #5, 594 #10, 637 #8 **Teacher's Guide:** T588
11. Estimating Solutions to Problems	
A. Identify a reasonable estimate to a problem.	**Student Edition:** 11 #3, 33, 39 #5, 89 #16, 140 #36, 186 #18, 191 #4, 211 #62, 268, 292 #85, 317 #6, 515 #6, 589, 617 #2, 637 #8 **Teacher's Guide:** T191

STANDARDS	PAGE REFERENCES
B. Determine a reasonable estimate, and describe the strategy used to arrive at the estimate.	**Student Edition:** 11 #3, 39 #5, 89 #16, 107 #32, 140 #36, 160 #11, 186 #18, 191 #4, 211 #62, 268, 292 #85, 327, 515 #6, 564 #1, 588-589, 594 #10, 617 #2, 637 #8 **Teacher's Guide:** T191, T588
C. Given an estimate as a solution, judge its reasonableness and justify the decision.	**Student Edition:** 11 #3, 33, 39 #5, 89 #16, 186 #18, 191 #4, 292 #85, 589 #2, 617 #2, 637 #8
12. Ratios and Proportions	
A. Solve problems involving ratios.	**Student Edition:** 518, 520-524, 527-528, 529, 532, 536 #27, #28, 543-545, 587 **Teacher's Guide:** 519a, T521, T527, T587
B. Solve 1-step problems involving proportions in context.	**Student Edition:** 540-542, 545-547, 550, 554 #4, 557 #17, 566-568, 568-571, 597 *Family Letter* 519 **Teacher's Guide:** T542, T546, T550, T566
13. Computation with Percents	
A. Find percents of whole numbers or the percent a given number is of another number.	**Student Edition:** 50 #18, 73 #74, 88 #14, 107 #33-#38, 214 #13, 279 #28, 343 #55-#57, 408 #30, 513, 568-569, 576-577, 599 #16-#18, 623 #23
B. Solve 1-step problems involving percents in context.	**Student Edition:** 107 #33-#38, 320 #20, #21, 343 #55-#57, 430 #42, 567 #1, #6
14. Time	
Not tested	
15. Approximating Measures	
A. Estimate lengths, areas and angle measures.	**Student Edition:** 31 #66, 209 #43, 292 #83, 495 #15 *Lab Investigation* 551-553 **Teacher's Guide:** T551-T553

STANDARDS	PAGE REFERENCES
16. Customary and Metric Measures	
A. Measure and determine perimeters, areas and volumes. Explain or show how the solution was determined.	**Student Edition:** 31 #66, 49 #16, 73 #71-#73, 98-99, 103-104, 110-111, 112-115, 122 #4, 123 #6, 125 #12, #13, 127 #29, 134-135, 253 #64, 267 #17, 318 #10, 320 #17, 484, 499-500, 515 #6 *Lab Investigation* 119-121 **Teacher's Guide:** T98, T110, T113, T135
B. Determine perimeters, areas and volumes.	**Student Edition:** 49 #16, 73 #71-#73, 103-104, 107 #32, 110-111, 122 #4, 123 #6, 125, 127 #29, 143, 253 #64, 267 #17, 320 #17, 343 #36, 417 #34, 418 #48, 489, 516 #8
C. Identify appropriate customary or metric units of measure for a given situation.	**Student Edition:** 39 #4, 47 #10, 211 #62, 318 #10, 511 #19, 621 #10
D. Solve problems involving conversions of customary or metric units of measure.	**Student Edition:** 39 #4, 48 #11, 209 #43, 264 #3, 317 #8, 318 #8-#10, 539 #48
E. Solve problems involving conversions of time units.	**Student Edition:** 643 #29-#31
17. Geometric Shapes and Properties	
A. Identify, describe or classify 2- and 3-dimensional geometric shapes and figures.	**Student Edition:** 107 #27, 109, 113, 136 #4, 138 #17, 433 #67, #68 *Lab Investigation* 608-609 *Remember* 39, 81, 142, 187, 271 **Teacher's Guide:** T109
B. Draw, describe and classify 2-dimensional geometric shapes and figures.	**Student Edition:** 50 #17, 122 #4, 187 #20 *Remember* 142, 187, 271
18. Spatial Relationships	
A. Identify lines of symmetry.	With Teacher help, the following pages could be used to meet this standard. **Student Edition:** 122 #4, 559 #21

STANDARDS	PAGE REFERENCES
B. Draw lines of symmetry.	With Teacher help, the following pages could be used to meet this standard. **Student Edition:** 122 #4, 559 #21
C. Identify congruent and similar figures.	**Student Edition:** 450-453, 454-455, 461-463, 464-466, 471-473, 480, 510 #17, 516, 555 #9, 559 #22, 560 #39-#42, 691 #29 *Family Letter* 449 *Lab Investigation* 476-477 *Remember* 454, 461 **Teacher's Guide:** 447a, T451, T471
D. Identify and explain congruent or similar figures.	**Student Edition:** 450-453, 454-455, 461-463, 464-466, 471-473, 480, 510 #17, 516, 555 #9, 559 #22, 560 #39-#42, 691 #29 *Family Letter* 449 *Lab Investigation* 476-477 *Remember* 454, 461 **Teacher's Guide:** 447a, T451, T471
E. Locate and draw points on grids.	**Student Edition:** 254-258, 259-261, 265, 279 #29, 496 #26 **Teacher's Guide:** T255, T257
F. Identify geometric transformations (reflections, rotations and translations).	Dilations are addressed on the following pages. **Student Edition:** 482, 485, 486 #2b, 490-491
G. Draw geometric transformations (reflections and rotations).	With Teacher adaptation, the following pages could be used to meet this standard. **Student Edition:** 481 #35, #36, 483 #5
H. Relate 2- and 3-dimensional representations and visa versa.	**Student Edition:** 129-131, 131-134, 136-139, 142 #8, 501-502 *Remember* 501 **Teacher's Guide:** T129, T131, T501

STANDARDS	PAGE REFERENCES
19. Tables, Graphs and Charts	
A. Identify correct information from tables, graphs and charts.	**Student Edition:** 18-20, 31 #67, 140 #36, 188-189 #23, 208 #33, 238 #40, 292 #85, 341 #33, 513 #36, 577 #22, 579 #28, 584 #57, 593 #9, 714-717
B. Create bar graphs, line graphs and stem-and-leaf plots from data in tables and charts.	**Student Edition:** 188-189 #23, 265 #6, 304 #3-#7, 335 #3, 336 #4, 341 #33, 537 #29, 620 #9, 722 #13
20. Statistics and Data Analysis	
A. Draw reasonable conclusions from data in tables, graphs and charts.	**Student Edition:** 31 #67, 140 #36, 238 #40, 265 #6, 292 #85, 336 #4, 341 #33, 408 #30, 577 #22, 579 #28, 593 #9, 620 #9, 722 #13 *Lab Investigation* 312-313
B. State a conclusion and explain why an answer is or is not reasonable based on the data.	**Student Edition:** 188-189 #23, 292 #85, 336 #4, 341 #33, 408 #30, 513 #36, 537 #29, 579 #28, 593 #9, 620 #9 *Lab Investigation* 312-313
C. Solve problems involving means, medians, modes and ranges of sets of data.	**Student Edition:** 31 #67, 238 #40, 242, 265 #6, 267 #6, 292 #85, 539 #49, 561, 659 #21, 695, 703 #11, 711-713, 721 #10 *Remember* 703, 711 **Teacher's Guide:** T242
21. Probability	
A. Identify correct solutions to problems involving elementary notions of probability and fairness expressed as fractions, decimals or percents.	**Student Edition:** 51 #32, 188 #22, 253 #65, 267 #20, 418 #50, 666-667, 668-671, 672-674, 678-680, 686, 690, 725 **Teacher's Guide:** T671, T676, T678, T682
B. Solve problems involving elementary notions of probability and fairness expressed as fractions, decimals or percents and justify solutions.	**Student Edition:** 51 #32, 253 #65, 267 #20, 418 #50, 668-671, 672-674, 676-677, 680-682, 686 #2, 690, 725 **Teacher's Guide:** T676, T682

STANDARDS	PAGE REFERENCES
C. Solve problems involving expected outcomes or predictions and justify solutions.	**Student Edition:** 127 #31, 678-680, 684 #2 **Teacher's Guide:** T678, T684
22. Patterns	
A. Identify the missing terms in a pattern, or identify rules for a given pattern using numbers and attributes.	**Student Edition:** 71 #38, 78-80, 86 #9, 89 #17, 185 #7, 204 #6-#8, 265 #6, 304 #2, 345-347, 348-350, 354-355, 373-374 #14, 381 #27-#28, 645-647, 662-663 #5 *Remember* 85 **Teacher's Guide:** T345, T346
B. Extend or complete patterns and state rules for given patterns using numbers and attributes.	**Student Edition:** 78-80, 82-83, 85-86, 89 #17, 185 #7, 204 #6-#8, 304 #2, 345-347, 348-350, 354-355, 358 #11, 654 #7, 656 #10 **Teacher's Guide:** T80, T82
23. Algebraic Concepts	
A. Solve simple 1- or 2-step algebraic equations.	**Student Edition:** 20-21, 278 #16-#21, 343 #50, 377 #31, 385-387, 392-393, 429 #1, #2 *Lab Investigation* 388-391 **Teacher's Guide:** T20, T21
B. Use order of operations.	**Student Edition:** 14, 155 *Remember* 155 **Teacher's Guide:** T14, T18
C. Evaluate expressions or solve equations and use formulas.	**Student Edition:** 4, 6 #2-#3, 13-14, 22 #5, 32-34, 37-41, 46-49, 163 #53-#57, 209 #36-#38, 212 #76-#81, 231, 244, 273-275, 429 #8-#13, 469, 629 *Lab Investigation* 42-45 *Remember* 238 **Teacher's Guide:** T4, T32, T37, T231, T273

STANDARDS	PAGE REFERENCES
D. Represent situations with algebraic expressions.	**Student Edition:** 4-9, 10-13, 15 #13, #17, 27 #39, 28 #41, 32-34, 35-36, 46-49, 184 #5
E. Write an expression to represent a situation.	**Student Edition:** 7 #2b, 9 #8a, 10-13, 17-18, 23 #9, 27 #39, 28 #41, 32-34, 35-36, 46-49, 406 #11, 434-436, 447 **Teacher's Guide:** T9, T17, T35
24. Classification and Logical Reasoning	
A. Solve problems involving the organization of data.	**Student Edition:** 188-189, 265 #6, 273 #2b, 336 #4, 579 #28, 675 #14
B. Sort or classify objects, and draw logical conclusions from data including Venn diagrams, combinations, permutations and transitive reasoning questions.	**Student Edition:** 31 #67, 108, 265 #6, 336 #4, 341 #33, 408 #30, 513 #36, 593 #9, 666-672 **Teacher's Guide:** T668
25. Mathematical Applications	
A. Solve extended numerical, statistical and spatial problems.	**Student Edition:** 25 #27, 31 #67, 88 #14, 126 #17, 128, 267 #20, 292 #85, 408 #30, 465 #6, 482, 485, 493 #5, 513, 561 *Lab Investigation* 119-121