



IMPACT MATHEMATICS

Algebra and More

Course 3

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STANDARDS	PAGE REFERENCES
1. Place Value	
A. Identify alternative forms of expressing numbers using scientific notation.	<p>Student Edition: 148, 151-152, 156-158, 162 #1, 164-165 #43-#45, 167 #55-#57, 182-183 #2-#5 <i>Lab Investigation</i> 159-161 <i>Review & Self-Assessment</i> 208 #3-#4</p> <p>Teacher's Guide: T148, T152, T156, T158</p>
2. Pictorial Representation of Numbers	
Not tested	
3. Equivalent Fractions, Decimals and Percents	
A. Rename fractions and mixed numbers as equivalent decimals and vice versa.	<p>Student Edition: 200-201, 204, 338-#46 <i>Explore</i> 661 <i>Think & Discuss</i> 200</p> <p>Teacher's Guide: AL T201; T114</p>

STANDARDS	PAGE REFERENCES
B. Rename fractions and decimals as equivalent percents and vice versa.	Student Edition: 549 #2b, 550 #1-#8, 553-554, 556 #2c, #3c, 559 #4, 560 #8, 570 #7-#8, 617 #4a <i>Think & Discuss</i> 565 Teacher's Guide: SA T553
C. Identify and/or shade decimals, fractions or percents of regions or sets.	Student Edition: 398 #40, 549-557, 558-563, 564 #27-#29 <i>Think & Discuss</i> 362 Teacher's Guide: SA T553
4. Order, Magnitude and Rounding of Numbers	
A. Order fractions and decimals including mixed numbers in context.	Student Edition: 34-35, 226-229, 235, 471 #3e, 626-628 Teacher's Guide: SA T227
B. Describe magnitude or order of mixed numbers, fractions and decimals in context.	Student Edition: 34-35, 54-55, 157 #4, 224 #19, 626-628
C. Round mixed numbers, fractions and decimals in context.	Student Edition: 34 #2, #4-#5, 35 #7, 41 #29a, 66 #12b, 124 #21b-c, 157 #3-#4, 497 #4-#6, 507 #17, 639 #6, 664
D. Locate points on number lines and scales, including fractions, mixed numbers, decimals and integers.	Student Edition: 224 #19, 232-233, 236, 238 #40a, 282 #8, 285 #24, 626-628 <i>Just the Facts</i> 195 <i>Lab Investigation</i> 161 <i>Share & Summarize</i> 234
5. Models for Operations	
A. Identify the appropriate operation or equation to solve a story problem.	Student Edition: 41 #29, 81 #9, 92 #5, 425 #57b, 497, 614, 634-635 <i>Lab Investigation</i> 159-161, 219-222, 475-478 Teacher's Guide: T436

STANDARDS	PAGE REFERENCES
B. Write a story problem from an equation.	Student Edition: 385 #8-#10, 409 #24, 436, 501 <i>Explore</i> 390 <i>Share & Summarize</i> 502, 517 Teacher's Guide: SA T390, T436
6. Basic Facts	
Not tested	
7. Computation with Whole Numbers and Decimals	
A. Add and subtract 3-, 4- and 5-digit whole numbers, money amounts and decimals.	Student Edition: 7 #4, 55 #5, 80 #6, 125 #23d, 137 #3c, 177, 229 #7, 235 #15 <i>Explore</i> 127 <i>Family Letter</i> 145
B. Multiply 2- and 3-digit whole numbers, money amounts and decimals by 1- or 2-digit numbers and decimals. Divide 2- and 3- digit whole numbers, money amounts and decimals by 1-digit whole numbers and decimals.	Student Edition: 7 #3, 55 #5, 63 #32, 77 #9, 80 #6, 107 #42, 123, 143 #24, 177, 182 #1 <i>Explore</i> 127 Teacher's Guide: T178
C. Multiply and divide whole numbers and decimals by 10, 100, 1,000, 0.1 and 0.01.	Student Edition: 110 #1, 118, 198 #3, 211 #19, 394 #1 <i>Think & Discuss</i> 117 Teacher's Guide: AL T201, T402
8. Computation with Fractions and Integers	
A. Add and subtract fractions and mixed numbers with reasonable and appropriate denominators.	Student Edition: 43 #33, #37, 217 #4, 223 #3, #6, 231 #9, 307 #42, 412-413, 421 #1-#5 Teacher's Guide: SA T217
B. Multiply whole numbers and fractions by fractions and mixed numbers.	Student Edition: 43 #33, #37, 111 #1, 215-216, 223 #5, 231 #9, 394 #10, 404-405 Teacher's Guide: T111

STANDARDS	PAGE REFERENCES
C. Add or multiply positive and negative integers.	Student Edition: 27 #6, 33 #2, 190, 260 #1, 378 #1 <i>Example 267</i> <i>Explore 4-5, 240</i> <i>Lab Investigation 366</i> <i>Think & Discuss 266, 362</i>
9. Solve Word Problems	
A. Solve multistep problems involving fractions, mixed numbers, decimals and money amounts with or without extraneous information.	Student Edition: 138 #25, 278 #21, 334 #3, 369 #8, 402 <i>Example 415, 416, 419</i> <i>Lab Investigation 270-274</i>
B. Solve multistep problems involving whole numbers, mixed numbers, money amounts and decimals.	Student Edition: 228 #6, 262 #4, 279 #25, 389 #63, 397 #39 <i>Example 32, 267</i>
C. Solve multistep problems involving whole numbers, fractions, mixed numbers, decimals or money amounts, and explain how the solution was determined.	Student Edition: 41 #30, 101, 238, 241, 268 #5, 279 #25, 389 #63, 397 #39, 408-409 #21 <i>Example 267</i> <i>Share & Summarize 417</i> <i>Think & Discuss 362</i>
10. Numerical Estimation Strategies	
Not tested	
11. Estimating Solutions to Problems	
A. Determine a reasonable estimate, and describe the strategy used to arrive at the estimate.	Student Edition: 34-35, 51-52, 53, 101, 157 #4, 172, 182 #1, 242 #2, 248 #3, 636 Teacher's Guide: AM T52
B. Given an estimate as a solution for problems involving whole numbers, mixed numbers, decimals and percents, judge its reasonableness and justify the decision.	Student Edition: 124 #21b-c, 247 #1-#2, 248 #3, 262 #4, 392 #6, 414 #66, 625, 633 <i>Think & Discuss 245</i> Teacher's Guide: AM T245

STANDARDS	PAGE REFERENCES
12. Ratios and Proportions	
A. Solve problems involving ratios.	Student Edition: 25-27, 30 #1-#2, 41 #29, 202, 660-662 <i>Lab Investigation</i> 475-478 <i>Review & Self-Assessment</i> 65 <i>Think & Discuss</i> 631 Teacher's Guide: AL T201; SA T25, T28
B. Solve problems involving proportions in context.	Student Edition: 7-11, 64, 186 #21, 261, 329, 512 #36-#38, 513 #50, 630 #33 Teacher's Guide: AL T7; T11
C. Solve multistep problems involving ratio or proportion, and explain how the solution was determined.	Student Edition: 41 #29, 261, 513 #50, 630 #33, 660-662, 667-669, 677 <i>Lab Investigation</i> 36-37, 475-478
13. Computation with Percents	
A. Find percents of whole numbers or the percent a given number is of another number.	Student Edition: 177-178, 512 #36-#38, 526, 544, 617 #4a
B. Solve problems involving percents in context.	Student Edition: 172, 177-178, 182, 183 #7, 526, 544, 560 #8, 568 #4, 617 #4a, 649 <i>Think & Discuss</i> 170
14. Time	
Not tested	
15. Approximating Measures	
A. Estimate lengths, areas, volumes and angle measures.	Student Edition: 34-35, 101 #13, 157 #4
16. Customary and Metric Measures	
A. Measure and determine perimeters, areas and volumes. Explain or show how the solution was determined.	Student Edition: 23 #22-#23, 62-63 #30-#31, 72 #1, 107 #42, #43, 255 #23-#24, 338 #21-#22, 441 #33-#34, 449 #7, 499-501, 533 #36, 615 #9 <i>Lab Investigation</i> 502-503 Teacher's Guide: AL T500

STANDARDS	PAGE REFERENCES
B. Determine perimeters, areas and volumes.	<p>Student Edition: 23 #22-#23, 62-63 #30-#31, 72 #1, 107 #42, #43, 255 #23-#24, 338 #21-#22, 441 #33-#34, 449 #7, 499-501, 533 #36, 615 #9 <i>Lab Investigation</i> 502-503</p> <p>Teacher's Guide: AL T500</p>
C. Solve problems involving conversions and/or operations within customary or metric units of measure.	<p>Student Edition: 81 #9, 123, 184 #15, 228 #4-#6, 389 #63, 441 #35, 479 #11, 513 #50, 677-679</p>
17. Geometric Shapes and Properties	
A. Identify, describe or classify 2- and 3-dimensional geometric shapes and figures.	<p>Student Edition: 107 #42-#43, 205 #53, 297, 465 #36, 533 #36 <i>Lab Investigation</i> 366-367</p>
B. Draw, describe and classify 2- and 3-dimensional geometric shapes and figures.	<p>Student Edition: 38 #2, 76, 126 #40, 294 #5, 301 #25, 341 #46, 453 #44, 536 #47, 564 #27-#29 <i>Lab Investigation</i> 366-367, 475-478</p>
18. Spatial Relationships	
A. Identify congruent and similar figures.	<p>Student Edition: 206 #58, 280 #33-#38, 294 #4, 308 #3, 315 #4, 329-331, 662 <i>Lab Investigation</i> 475-478</p> <p>Teacher's Guide: T329</p>
B. Draw, classify, describe and/or explain why figures are similar.	<p>Student Edition: 206 #58, 280 #33-#38, 294 #4, 308 #3, 315 #4, 329-331, 662 <i>Lab Investigation</i> 475-478</p> <p>Teacher's Guide: T329</p>
C. Locate and draw points on four-quadrant coordinate grids.	<p>Student Edition: 23 #25, 27 #1, #2, 45, 63 #32, 104 #28d, 339-342, 343-345, 346</p>
D. Identify geometric transformations (reflections, rotations and translations).	<p>Student Edition: 288-291, 302-308, 313-315, 322-328, 330-333 <i>Family Letter</i> 287 <i>Lab Investigation</i> 318-321</p>

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E. Draw geometric transformations (reflections, rotations and translations).	Student Edition: 293, 300 #15, 305-306 <i>Explore</i> 289 <i>Share & Summarize</i> 291, 296, 306 Teacher's Guide: AL T306; AM T295; SA T296
F. Relate 2- and 3-dimensional representations and vice versa.	Student Edition: 38 #2, 126 #4, 299, 453 #44, 465 #36, 536 #47 Teacher's Guide: QQ 301
19. Tables, Graphs and Charts	
A. Identify correct information from tables, graphs and charts.	Student Edition: 45, 101, 120 #2, 352, 410 #36, 537, 562 #11, 602-604, 614-615, 625-627, 652 #1-#2
B. Create graphs from data in tables and charts.	Student Edition: 410 #36, 537, 575, 605-608, 625-627, 638-639, 645
20. Statistics and Data Analysis	
A. Draw reasonable conclusions from data in tables, graphs and charts.	Student Edition: 45, 58 #14, 101, 157 #4, 352, 389 #63, 410 #36, 441 #35, 537, 575, 608-612, 621, 625-627, 631, 633, 636, 643 #4
B. State a conclusion and explain why an answer is or is not reasonable based on the data.	Student Edition: 45, 58 #14, 101, 157 #4, 352, 389 #63, 410 #36, 441 #35, 537, 575, 608-612, 621, 625-627, 631, 633, 636, 643 #4
C. Solve problems involving means, medians, modes and ranges of sets of data.	Student Edition: 45, 53 #2, 54, 62 #28, 238 #40, 410 #36, 518-520, 537, 614 #8, 616 Teacher's Guide: T614
21. Probability	
A. Identify correct solutions to problems involving elementary notions of probability and fairness expressed as fractions, decimals or percents.	Student Edition: 482 #25, 544, 549, 551, 558-559, 560 #8, 568, 569, 580, 583-585, 588-589, 591 #4, 593 #10 <i>Lab Investigation</i> 545-546

STANDARDS	PAGE REFERENCES
B. Solve problems involving elementary notions of probability and fairness expressed as fractions, decimals or percents and justify solutions.	Student Edition: 482 #25, 544, 549, 551, 558-559, 560 #8, 568, 569, 580, 583-585, 588-589, 591 #4, 593 #10 <i>Lab Investigation 545-546</i>
C. Solve problems involving expected outcomes or predictions and justify solutions.	Student Edition: 482 #25, 551, 558-559, 563 #13, 573 #2, 638-639, 649 <i>Lab Investigation 545-546</i>
22. Patterns	
A. Identify the missing terms in a pattern, or identify rules for a given pattern using numbers and attributes.	Student Edition: 81 #8, 166 #50, 224 #18, 488-489, 492-496, 510 #27, 511 #33 Teacher's Guide: T492
B. Extend or complete patterns and state rules for given patterns using numbers and attributes.	Student Edition: 81 #8, 116 #50, 224 #18, 488-489, 492-496, 510 #27, 511 #33 Teacher's Guide: T492
23. Algebraic Concepts	
A. Solve simple equations, including 2-step equations.	Student Edition: 10 #3-#5, 40 #20-#28, 43 #33-#38, 107 #44, 227-229, 229-231, 235 #16, 240, 245-248, 261 #1-#3, 264, 268, 275 #1 Teacher's Guide: SA T216
B. Solve multistep problems using algebraic concepts.	Student Edition: 126 #29-#33, 362-365, 388 #49, #50, 409 #22, #23, 427 #4-#6, 428 #11-#12, 429, 581 #21-#24 <i>Share & Summarize 248</i>
C. Evaluate expressions or solve equations and use formulas.	Student Edition: 43 #33-#38, 81 #8, 107 #44, 116 #50, 227-229, 229-231, 235 #16, 261 #1-#3, 264, 268, 275 #1, 488-489, 492-496, 510 #27, 511 #33 Teacher's Guide: T492

STANDARDS	PAGE REFERENCES
D. Represent situations with algebraic expressions or equations.	Student Edition: 81 #8, 91, 107 #44, 120-121 #1-#3, 124 #21, 225 #20 <i>Example 246</i> <i>Share & Summarize 92</i>
E. Write an expression or equation to represent a situation.	Student Edition: 81 #8, 91, 107 #44, 115 #7-#9, 120-121 #1-#3, 124 #21, 218, 225 #20, 251 #10, 253 #14 <i>Example 246</i> <i>Share & Summarize 92</i>
24. Classification and Logical Reasoning	
A. Solve problems involving the organization of data.	Student Edition: 410 #36, 537, 575, 605-608, 625-627, 638-639, 645
B. Sort or classify objects, and draw logical conclusions from data including Venn diagrams, combinations, permutations and transitive reasoning questions.	Student Edition: 54, 551-553, 558 #2, 560, 583-586, 587-589, 605-607, 631-641 <i>Share & Summarize 554</i> Teacher's Guide: AM T583; SA T553
25. Mathematical Applications	
A. Solve extended numerical, statistical and spatial problems.	Student Edition: 74, 101, 123, 175-176, 582-584 <i>Example 419</i> <i>Lab Investigation 159-161, 219-222, 475-478</i> Teacher's Guide: AT T89