

Houghton Mifflin Math Expressions
Grade 1
 correlated to
Illinois Mathematics Assessment Framework

Illinois Mathematics Assessment Framework	<i>Houghton Mifflin Math Expressions</i>
STATE GOAL 6: NUMBER SENSE	
Demonstrate and apply a knowledge and sense of numbers, including numeration and operations (addition, subtraction, multiplication, division), patterns, ratios and proportions.	
Calculators Not Allowed	
Standard 6A – Representations and Ordering	
Demonstrate knowledge and use of numbers and their representations in a broad range of theoretical and practical settings.	
Read, Write, and Represent Numbers	
6.3.01 Read, write, recognize, and model equivalent representations of whole numbers and their place values up to 100,000.	SAB: 5, 9, 17, 23, 25, 93, 115, 119, 123, 131, 145, 146, 161, 163, 164, 210 TG: 1, 5, 6, 7, 9–10, 13, 17–18, 19–22, 25–26, 27, 32, 33, 34–35, 37, 39, 42–44, 45, 46–47, 51, 53, 56, 57, 58–59, 61, 63, 68, 69, 73, 75, 79, 80, 81, 83, 87, 88–92, 93, 99, 100–101, 103–104, 121, 127, 209, 217, 223, 241, 247, 265, 273, 283, 293, 294–298, 299, 300, 305, 306–307, 309–310, 311, 312–315, 317, 324, 325, 326–329, 331, 332–336, 337, 343, 349, 350–352, 353, 370, 371, 373–375, 378, 387, 403, 418–421, 424–426, 428, 429, 433, 441, 447, 454, 455, 463, 469, 484, 490, 491, 497, 527, 530, 539, 545, 561, 579, 659, 665, 671, 685, 697, 703, 707, 713, 725, 731 H/R: 1, 9, 10, 13, 17, 18, 21, 26, 29, 33, 95, 99, 100, 104, 105, 107, 109, 115, 119, 137, 146, 154, 156
6.3.02 Identify and write (in words and standard form) whole numbers up to 100,000.	SAB: 5, 7, 9, 17, 23, 25, 29, 31, 161 TG: 3, 9–10, 14–15, 18, 22, 35, 44, 53, 56, 59, 72, 77, 80, 92, 420 H/R: 14, 17, 25, 30
6.3.03 Recognize a fraction represented with a pictorial model.	SAB: 233, 239, 240, 241, 243 TG: 586–590, 600–604, 606–607, 609, 613–616, 618–619, 621, 630 H/R: 185, 189, 190, 193, 194, 197
6.3.04 Represent multiplication as repeated addition.	TG: 577, 583
Order and Compare Numbers	
6.3.05 Order and compare whole numbers up to 10,000 using symbols (>, <, or =) and words (e.g., greater (more) than, less than, equal to, between).	SAB: 1, 91, 101, 193, 197, 199, 201, 202, 204, 207, 209 TG: 4, 115, 133, 177, 189, 232, 256, 391, 479, 480, 482, 484, 485, 487–488, 490, 491, 493–495, 498–502, 503, 505, 507, 509, 512–514, 515, 516, 518, 521, 522–526, 527, 528–529, 532, 533, 539, 545, 551 H/R: 153, 155, 159, 160, 163, 164

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6.3.06 Order and compare decimals expressed using monetary units.	
Number Line	
6.3.07 Identify and locate whole numbers and halves on a number line.	TG: 338–339, 344, 354–355, 379, 394–395, 397
Classifications of Numbers	
6.3.08 Solve problems involving descriptions of numbers, including characteristics and relationships (e.g., odd/even, factors/multiples, greater than, less than).	SAB: 37 TG: 9, 41, 43, 94–97, 103–104, 425, 575–576, 579, 585, 591, 599, 605, 611, 631, 638, 641–642, 643 H/R: 31, 33, 201
Standards 6B, 6C – Computation, Operations, Estimation, and Properties	
6B: Investigate, represent and solve problems using number facts, operations (addition, subtraction, multiplication, division) and their properties, algorithms and relationships.	
6C: Compute and estimate using mental mathematics, paper-and-pencil methods, calculators and computers.	
Number Operations	
6.3.09 Solve problems and number sentences involving addition and subtraction with regrouping.	SAB: 133, 135, 139, 141, 143, 181, 185, 267, 269, 270, 273, 275 TG: 339–341, 344–348, 354–358, 359, 360–363, 365, 366–370, 371, 372, 377, 379, 381–382, 404, 423, 425, 427–428, 435, 454, 458–461, 471–473, 673, 678–680, 681, 683, 686–690, 692–695, 698–702, 704–705, 712 H/R: 111, 112, 115, 116, 117, 119, 120, 121, 123, 124, 130, 137, 145, 146, 147, 151, 213, 215, 216, 219, 223, 224, 234
6.3.10 Solve problems involving the value of a collection of bills and coins whose total value is \$10.00 or less, and make change.	SAB: 53, 54, 97, 153, 157, 165, 167, 169, 239, 261, 262, 265, 267, 268, 273, 279, 280, 281, 283, 284, 287 TG: 146–152, 164, 188, 190, 249–252, 261, 266–267, 388–392, 393, 394–397, 399, 405, 408–409, 411, 412–413, 415–416, 417, 428, 430–432, 437, 439, 442–443, 445, 451, 459, 461, 490, 606–607, 612, 615, 617, 621, 623, 637, 649, 659, 660–664, 666–670, 671, 672–675, 677, 684, 686–690, 691, 697, 702, 703, 707, 714–715, 717, 719, 721–723, 725, 726–727, 729–730, 732–736 H/R: 47, 52, 60, 79, 125, 131, 133, 134, 138, 139, 156, 191, 207, 209, 211, 214, 220, 225, 229, 231, 232, 238
6.3.11 Model and apply basic multiplication facts (up to 10×10), and apply them to related multiples of 10 (e.g.,	TG: 577, 583

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3×4=12, 30×4=120).	

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Properties	
6.3.12 Use the inverse relationships between addition and subtraction to complete basic fact sentences and solve problems (e.g., $5 + 3 = 8$ and $8 - 3 = \underline{\quad}$).	TG: 257, 263, 281, 448–449
6.3.13 Solve problems involving the multiplicative identity of one (e.g., $3 \times 1 = 3$) and the additive identity of zero (e.g., $3 + 0 = 3$).	SAB: 123 TG: 381–382, 404, 454 H/R: 130, 146
Estimation	
6.3.14 Make estimates appropriate to a given situation with whole numbers.	SAB: 91, 101, 159 TG: 232, 256, 402–404, 858–862 H/R: 129
Standard 6D – Ratios, Proportions, and Percents Solve problems using comparison of quantities, ratios, proportions and percents.	
Identify and Express Ratios	
No benchmark expectations at this grade level.	
Proportional Reasoning	
No benchmark expectations at this grade level.	
Percents	
No benchmark expectations at this grade level.	
STATE GOAL 7 MEASUREMENT: Estimate, make and use measurements of objects, quantities and relationships and determine acceptable levels of accuracy.	
Calculators Not Allowed	
Standards 7A, 7B, 7C – Units, Tools, Estimation, and Applications 7A: Measure and compare quantities using appropriate units, instruments and methods. 7B: Estimate measurements and determine acceptable levels of accuracy. 7C: Select and use appropriate technology, instruments and formulas to solve problems, interpret results and communicate findings.	
Elapsed Time	
7.3.01 Solve problems involving simple elapsed time in compound units (e.g., hours, minutes, days).	SAB: 252 TG: 646–647, 653
Measurement Tools	
7.3.02 Select and use appropriate standard units and tools to measure length (to the nearest inch or cm), time (to the nearest minute), and temperature (to the nearest degree).	SAB: 211, 212, 213, 214, 215, 249, 252, 255, 319, 323, 324, 325, 326, 327, 329, 330, 331, 332, 333, 335, 336 TG: 330, 534–537, 540–544, 550, 632–635, 642, 644–648, 650–653, 670, 690, 813, 814–818, 819, 820–821, 823, 824–828, 829, 830–834, 835, 836–839, 841, 842–845, 847, 848–849, 851, 854–856, 860 H/R: 173, 176, 202, 203, 204, 205, 210, 265, 267, 269, 271

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Area, Perimeter, and Circumference	
7.3.03 Solve problems involving the perimeter of a polygon with given side lengths or a given non-standard unit (e.g., paperclip).	SAB: 325, 326, 327, 331, 332, 333 TG: 830–834, 838, 842–845 H/R: 269
7.3.04 Solve problems involving the area of a figure when whole and half square units are shown within the figure.	TG: 859
Estimation	
7.3.05 Compare and estimate length (including perimeter), area, and weight/mass using referents.	SAB: 319, 323, 324, 329, 330 TG: 647, 813, 816, 819, 823, 824–828, 829, 834, 835, 836–837, 839, 841, 847, 854, 859–860 H/R: 265, 267, 271
Volume and Surface Area	
7.3.06 Determine the volume of a solid figure that shows cubic units.	
Measurement Conversions	
7.3.07 Solve problems involving simple unit conversions within the same measurement system for time and length.	TG: 855
Indirect Measurements and Scale Drawings	
No benchmark expectations at this grade level.	
STATE GOAL 8: ALGEBRA: Use algebraic and analytical methods to identify and describe patterns and relationships in data, solve problems and predict results.	
Calculators Not Allowed	
Standard 8A – Representations, Patterns, and Expressions Describe numerical relationships using variables and patterns.	
Patterns	
8.3.01 Determine a missing term in a pattern (sequence), describe a pattern (sequence), and extend a pattern (sequence) when given a description or pattern (sequence).	SAB: 5, 7, 9, 10, 17, 23, 25, 29, 31, 32, 56, 103 TG: 8–11, 15–18, 22–25, 35–36, 53, 55–56, 59, 68, 72–73, 77–78, 80, 109, 156, 262, 428, 454, 558–560 H/R: 3, 5, 7, 11, 17, 19, 22, 23, 25, 137, 141, 146
Write and Simplify Expressions	
8.3.02 Write an expression to represent a given situation.	SAB: 11, 17, 23, 24, 25, 27, 29, 31, 32, 37 TG: 28–32, 35, 40–41, 52–56, 58–59, 64–68, 70, 73–74, 76, 77–80, 82, 85, 96, 101, 103–104, 114 H/R: 9, 17, 21, 23, 25, 34, 36

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Evaluate Algebraic Expressions	
No benchmark expectations at this grade level.	
Standard 8B – Connections Using Tables, Graphs, and Symbols Interpret and describe numerical relationships using tables, graphs and symbols.	
Describing Change	
No benchmark expectations at this grade level.	
Coordinate System	
No benchmark expectations at this grade level.	
Representations	
No benchmark expectations at this grade level.	
Inequalities	
No benchmark expectations at this grade level.	
Standard 8C, 8D – Writing, Interpreting, and Solving Equations 8C: Solve problems using systems of numbers and their properties. 8D: Use algebraic concepts and procedures to represent and solve problems.	
Write Equations and Inequalities	
8.3.03 Represent simple mathematical relationships with number sentences (equations and inequalities).	SAB: 41, 45, 46, 47, 51, 53, 55, 61, 65, 67, 69, 73, 85, 123, 129, 231, 305, 307, 309 TG: 52, 110–114, 116–119, 122–126, 128–129, 131, 134–135, 137–138, 140–143, 148, 152, 154–155, 157, 160–164, 166, 169, 171, 172–176, 179–181, 183, 185–188, 193, 196–197, 199–200, 203, 210, 216, 225, 228, 242, 246, 251–252, 253, 255, 257, 259, 260, 263–264, 268, 269, 270–272, 279, 280–282, 298, 314–315, 318, 322–324, 336, 360, 465, 468, 578, 669, 741, 753, 759, 774–775, 780–781, 786–787, 789, 801, 805 H/R: 35, 39, 40, 43, 44, 47, 48, 51, 52, 55, 56, 59, 63, 64, 65, 66, 68, 72, 79, 83, 87, 91, 92, 93, 94, 96, 103, 108, 149, 150, 181
Solve Equations and Inequalities	
8.3.04 Solve one–step addition and subtraction equations that have a missing number or missing operation sign (e.g., $3 + \underline{\quad} = 5$, $6 \underline{\quad} 1 = 7$).	SAB: 79, 80, 85, 105, 175, 183 TG: 71, 125, 157, 187, 203, 211–216, 218, 224–228, 229, 230–231, 233, 235, 237, 239–240, 241, 242, 258, 264, 271, 274–275, 281–282, 284–285, 287, 427, 439, 448–454, 464, 466–468, 471, 531, 720, 723, 726, 729–730, 743, 745, 765, 771, 777, 795, 801 H/R: 67, 71, 73, 75, 84, 89, 91, 93, 141, 149, 150, 151, 227, 230

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8.3.05 Solve word problems involving unknown quantities.	SAB: 83, 95, 97, 106, 240, 273, 277, 293, 297, 301, 303, 311, 313 TG: 29, 31, 43, 49, 61, 73, 85, 113, 119, 143, 157, 175, 178, 181, 184, 187, 190–191, 193, 199, 202, 218–219, 221, 227, 233, 236, 239–240, 243–245, 248, 250–252, 254, 257, 263–264, 266–267, 272, 275–277, 282, 284, 287, 303, 307, 319, 324, 336, 341, 344, 357, 369, 406, 408, 415, 432, 436, 443, 453–454, 456–457, 461, 464–465, 467–468, 470, 473, 526, 532, 544, 578, 581, 587, 590, 607, 609, 616, 670, 687–688, 690, 702, 708–709, 711–712, 730, 742–746, 747, 748–749, 751–752, 757, 760–763, 766–767, 769–770, 772–773, 775–776, 778–779, 781, 783, 784–785, 787, 790–791, 793–794, 796–799, 802–804, 806–808, 818 H/R: 69, 73, 75, 76, 77, 79, 80, 81, 83, 84, 85, 87, 88, 89, 91, 93, 101, 103, 108, 133, 145, 147, 149, 150, 151, 167, 169, 174, 182, 183, 185, 186, 187, 191, 194, 206, 209, 215, 220, 223, 227, 229, 230, 233, 235, 236, 237, 241, 242, 243, 245, 247, 249, 250, 251, 253, 254, 255, 259
STATE GOAL 9: GEOMETRY	
Use geometric methods to analyze, categorize and draw conclusions about points, lines, planes and space.	
Calculators Not Allowed	
Standard 9A – Properties of Single Figures and Coordinate Geometry	
Demonstrate and apply geometric concepts involving points, lines, planes and space.	
Properties of Single Figures	
9.3.01 Identify, describe, and sketch two-dimensional shapes (triangles, squares, rectangles, pentagons, hexagons, and octagons) according to the number of sides, length of sides, and number of vertices.	SAB: 7, 9, 10, 17, 23, 61, 84, 217, 218, 219, 221, 223, 333 TG: 14–18, 20, 22–25, 32, 34–37, 44, 53, 80, 83, 162, 220, 546–550, 552–553, 555, 564–565, 567, 830–831, 844 H/R: 5, 7, 10, 13, 26, 175
9.3.02 Identify and describe three-dimensional shapes (cubes, spheres, cones, cylinders, prisms, and pyramids) according to their characteristics (faces, edges, vertices).	SAB: 223 TG: 564–565, 567
Circles	
No benchmark expectations at this grade level.	
Coordinate Geometry	
9.3.03 Locate and identify points using numbers and symbols on a grid, and describe how points relate to each other on a grid (e.g., ♥ is 2 units below *, point A is 3	SAB: 215 TG: 454, 542

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units to the right of point B).	

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Symmetry	
9.3.04 Identify whether or not a figure has a line of symmetry, and sketch or identify the line of symmetry.	SAB: 235, 237 TG: 592–595, 597
Transformations	
9.3.05 Identify images resulting from flips (reflections), slides (translations), or turns (rotations).	SAB: 217, 218 TG: 546–550, 558 H/R: 175, 177
Lines, Segments, Rays, and Angles	
9.3.06 Identify parallel lines.	
Standard 9B – Relationships Between and Among Multiple Figures Identify, describe, classify and compare relationships using points, lines, planes and solids.	
Relationships Between Two– and Three–Dimensional Objects	
9.3.07 Identify the two– dimensional components of a three–dimensional object (e.g., a cube has square faces).	TG: 564–565, 567
9.3.08 Identify a three– dimensional object from its net.	
Composing and Decomposing Figures	
9.3.09 Predict the result of putting shapes together (composing) and taking them apart (decomposing).	SAB: 219 TG: 552–553, 555, 574–575, 578 H/R: 181
Congruency and Similarity	
9.3.10 Identify congruent and similar figures by visual inspection.	SAB: 221 TG: 563–564, 567
Distance	
9.3.11 Determine the distance between two points on the number line in whole numbers.	TG: 394–395, 397
Standard 9C – Justifications of Conjectures and Conclusions Construct convincing arguments and proofs to solve problems.	
<i>This standard is not assessed in isolation. Rather, its essence is assessed indirectly through problems that require this type of thinking.</i>	
Standard 9D – Trigonometry Use trigonometric ratios and circular functions to solve problems.	
<i>This standard is not assessed on the state assessment until grade 11.</i>	

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STATE GOAL 10: DATA ANALYSIS, STATISTICS, AND PROBABILITY	
Collect, organize and analyze data using statistical methods; predict results; and interpret uncertainty-using concepts of probability.	
Calculators Not Allowed	
Standards 10A, 10B – Data Analysis and Statistics	
10A: Organize, describe and make predictions from existing data.	
10B: Formulate questions, design data collection methods, gather and analyze data and communicate findings.	
Read and Interpret Displays	
10.3.01 Read and interpret data represented in a pictograph, bar graph, Venn diagram (with two circles), tally chart, or table.	SAB: 25, 193, 197, 199, 201, 202, 203, 204, 205, 210, 245, 246, 247, 253 TG: 32, 44, 56, 59, 68, 92, 98, 104, 480–484, 486–490, 492–495, 498, 504–505, 507, 510–514, 516–519, 526, 530, 532, 620 624–626, 627–629, 630, 650, 664 H/R: 9, 13, 17, 18, 21, 29, 32, 33, 153, 155, 157, 161, 163, 164, 165, 168, 170, 197, 198, 208
Complete and Create Displays	
10.3.02 Complete missing parts of a pictograph, bar graph, tally chart, or table for a given set of data.	SAB: 197, 199, 202, 205, 246 TG: 484, 488, 490, 494, 500, 502, 517–518, 526, 532, 625, 664 H/R: 153, 155, 157, 165, 168, 170, 208
Line of Best Fit	
No benchmark expectations at this grade level.	
Statistics	
10.3.03 Determine the mode, given a set of data or a graph.	
Standard 10C – Probability	
Determine, describe and apply the probabilities of events.	
Probability	
10.3.04 Classify events using words such as certain, most likely, equally likely, least likely, possible, and impossible.	TG: 620–621, 627, 629–630
10.3.05 Describe the chances associated with a context presented visually, including using the response format “3 out of 4.”	TG: 620–621, 627, 629–630
Outcomes and Counting Principles	
No benchmark expectations at this grade level.	