

Houghton Mifflin Math Expressions
Grade 3
 correlated to
Illinois Learning Standards for Mathematics

Illinois Learning Standards for Mathematics Early Elementary	<i>Houghton Mifflin Math Expressions</i>
STATE Goal 6: Demonstrate and apply a knowledge and sense of numbers, including numeration and operations (addition, subtraction, multiplication, division), patterns, ratios and proportions.	
A. Demonstrate knowledge and use of numbers and their representations in a broad range of theoretical and practical settings.	
6.A.1a Identify whole numbers and compare them using the symbols $<$, $>$, or $=$ and the words “less than”, “greater than”, or “equal to”, applying counting, grouping and place value concepts.	SAB: 1–2, 12, 13, 17, 19–20, 31, 131–132 TG: 2–8, 9, 12–14, 18, 19, 21, 22–25, 27, 29, 30–34, 35, 36, 38–42, 43, 267–268, 271, 274, 282–284, 287 H/R: 1, 3, 5–8, 9, 18, 20, 42, 69, 71
6.A.1b Identify and model fractions using concrete materials and pictorial representations.	SAB: 346, 471–422, 423–424, 425–426, 431–434, 435–436, 449, 452, 454, 458–459, 461 TG: 634–635, 728–734, 735, 736, 737–740, 741, 742, 743–746, 747, 748, 753, 761–766, 767, 768, 769–772, 773, 782–787, 791, 793, 797, 799, 801–802, 806, 812, 816, 819, 821–823, 826, 831 H/R: 243, 245, 247, 253–254, 255, 261, 263, 265, 267
B. Investigate, represent and solve problems using number facts, operations (addition, subtraction, multiplication, division) and their properties, algorithms and relationships.	
6.B.1 Solve one- and two-step problems with whole numbers using addition, subtraction, multiplication and division.	SAB: 13, 19, 20, 33, 34, 39–40, 41, 43, 77–78, 79–80, 81–82, 93–94, 97–98, 135, 139, 155–156, 164–165, 200–201, 209–210, 215–217, 220, 225, 239, 274, 288, 303, 336–337, 370–373, 376–378, 383–384 TG: 24, 38–39, 40–42, 43, 46, 82, 85, 100–103, 116–117, 124, 175–176, 180, 183, 218–221, 228, 365, 431–443, 451, 453–456, 617–619, 665–666, 694 H/R: 26, 29–30, 43, 45, 47, 55, 91, 115, 187–192, 193, 201, 205, 209–210, 211, 215–216, 217–218, 220, 223, 228, 229–230, 231–232

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C. Compute and estimate using mental mathematics, paper-and-pencil methods, calculators and computers.	
6.C.1a Select and perform computational procedures to solve problems with whole numbers.	SAB: 13, 19, 20, 33, 34, 39–40, 41, 43, 77–78, 79–80, 81–82, 93–94, 97–98, 135, 139, 155–156, 164–165, 200–201, 209–210, 215–217, 220, 225, 239, 274, 288, 303, 336–337, 370–373, 376–378, 383–384 TG: 24, 38–39, 40–42, 43, 46, 82, 85, 100–103, 116–117, 124, 175–176, 180, 183, 218–221, 228, 365, 431–443, 451, 453–456, 617–619, 665–666, 694 H/R: 26, 29–30, 43, 45, 47, 55, 91, 115, 187–192, 193, 201, 205, 209–210, 211, 215–216, 217–218, 220, 223, 228, 229–230, 231–232
6.C.1b Show evidence that whole number computational results are correct and/or that estimates are reasonable.	SAB: 124, 129 TG: 270, 277 H/R: 67
D. Solve problems using comparison of quantities, ratios, proportions and percents.	
6.D.1 Compare the numbers of objects in groups.	
STATE GOAL 7: Estimate, make and use measurements of objects, quantities and relationships and determine acceptable levels of accuracy.	
A. Measure and compare quantities using appropriate units, instruments and methods.	
7.A.1a Measure length, volume and weight/mass using rulers, scales and other appropriate measuring instruments in the customary and metric systems.	SAB: 47–48, 49–50, 57, 59, 66, 507, 508, 512, 513, 516, 520, 523, 526, 529–532 TG: 126–128, 129–132, 140, 142, 146, 149–150, 152, 178, 224, 236, 324, 400, 511–512, 912–916, 920, 922, 924–925, 930–932, 940–942, 944, 946, 948–952, 956, 958, 966–972, 978, 994 H/R: 31, 35, 37, 44, 56, 58, 80, 98, 291, 293, 295, 299, 301, 303, 307, 310, 312
7.A.1b Measure units of time using appropriate instruments (e.g., calendars, clocks, watches—both analog and digital).	SAB: 401–404, 407–412, 413–414 TG: 702–706, 707, 710–714, 715, 718–720, 721 H/R: 237, 239, 241

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7.A.1c Identify and describe the relative values and relationships among coins and solve addition and subtraction problems using currency.	SAB: 11, 25, 26, 27, 28, 29, 30, 34, 38, 133, 134, 135, 137, 138, 139, 140 TG: 14–16, 19, 54–58, 61–63, 67–70, 85–86, 89, 90, 95–96, 98, 112, 114, 117, 208, 242, 290–296, 298–302, 303, 304–308, 309, 316, 317, 344, 345, 353, 360, 361, 392, 468, 475, 504, 512, 518, 526, 544, 630, 686 H/R: 3, 13, 17, 22, 23, 27, 52, 60, 71, 73, 74, 75, 76, 78, 86, 90, 140, 170, 172, 178, 184, 216, 234, 236
7.A.1d Read temperatures to the nearest degree from Celsius and Fahrenheit thermometers.	SAB: 533–534 TG: 974–976, 977, 978 H/R: 309
B. Estimate measurements and determine acceptable levels of accuracy.	
7.B.1a Given a problem, describe possible methods for estimating a given measure.	SAB: 507, 512, 513, 516, 529–532, 534 TG: 567, 581, 913–914, 915, 920, 921, 925, 929–930, 931, 934, 945, 948, 951, 966–970, 971, 972, 976, 977, 982 H/R: 291, 293, 307, 309
7.B.1b Compare estimated measures to actual measures taken with appropriate measuring instruments.	SAB: 517 TG: 915, 931, 951, 963, 971 H/R: 295, 297
C. Select and use appropriate technology, instruments and formulas to solve problems, interpret results and communicate findings.	
7.C.1 Determine perimeter and area using concrete materials (e.g., geoboards, square tiles, grids, measurement instruments).	SAB: 65–66, 271–272, 307–309, 313–314, 317–318 TG: 131, 148–150, 508–510, 511, 512, 562–566, 567, 570–572, 573, 576–579, 581 H/R: 37, 193, 195

Houghton Mifflin Math Expressions
Grade 3
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Illinois Learning Standards for Mathematics

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STATE GOAL 8: Use algebraic and analytical methods to identify and describe patterns and relationships in data, solve problems and predict results.	
A. Describe numerical relationships using variables and patterns.	
8.A.1a Identify, describe and extend simple geometric and numeric patterns.	SAB: 147, 179, 180–182, 185–186, 187–190, 193, 219, 230, 238, 275, 279, 287, 304, 323, 333, 339, 358, 367, 407–408 TG: 69, 215, 295, 322, 352, 396–400, 402–404, 405, 406, 408–412, 413, 414, 420–421, 423, 427, 461–462, 472–473, 476, 478–484, 489, 497–498, 516, 520–521, 536–540, 554, 568, 589–590, 596, 607–608, 623, 630, 635, 652–653, 655, 660, 662, 710, 808 H/R: 97, 99, 101, 125, 194, 201, 227, 264
8.A.1b Solve simple number sentences (e.g., $2 + \square = 5$).	SAB: 71, 73, 77–78, 80, 86–87, 89–90, 93–94, 98, 163, 193, 194, 199, 200–201, 207–210, 215–217, 219, 224, 232, 238, 271, 279, 288, 324, 334, 339, 340, 357, 371–373 TG: 163–165, 167–168, 171, 173–176, 177, 179–182, 183, 185, 187–192, 193, 195, 201, 203–206, 207, 209, 211, 215, 217–221, 341, 351, 354–358, 360, 362–364, 420, 426, 441, 450–456, 457, 464, 485, 499, 538–540, 549, 592, 600, 604, 608–612, 623–627, 667–669, 672 H/R: 90, 94, 96, 107, 111, 115, 131, 135, 206, 215, 223, 229
B. Interpret and describe numerical relationships using tables, graphs and symbols.	
8.B.1 Solve problems involving pattern identification and completion of patterns.	SAB: 189–190 TG: 405, 409–412, 413, 414 H/R: 101

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Grade 3
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C. Solve problems using systems of numbers and their properties.	
8.C.1 Describe the basic arithmetic operations (addition, subtraction, multiplication, division) orally, in writing and using concrete materials and drawings.	SAB: 13, 19–20, 23–24, 31–32, 33–35, 37, 39, 41, 84–87, 89–91, 93–94, 135, 139, 155–156, 163, 165, 200–201, 209–210, 215–217, 220, 225, 232, 239, 274, 288, 303, 336–337, 347, 350, 352, 370–371, 376–377, 383, 389 TG: 24–26, 27, 38–42, 43, 46–50, 55, 60–62, 63, 72–78, 79, 82–88, 92–96, 97, 100–102, 106, 110, 198, 202, 204, 206, 210, 212, 214, 218, 220, 294, 304, 340, 342, 362, 366, 431, 433, 442, 443, 451, 453, 454, 465, 474, 490, 504, 515, 542, 553, 617, 618, 636, 644, 646, 665, 667, 676, 677, 683, 689 H/R: 9, 11, 19, 21, 29, 41, 43, 45, 49, 51, 55, 71, 89, 91, 111, 115, 121, 125, 131, 135, 171, 179, 183, 187, 191, 201, 211, 215, 217, 219, 223, 231, 233
D. Use algebraic concepts and procedures to represent and solve problems.	
8.D.1 Find the unknown numbers in whole-number addition, subtraction, multiplication and division situations.	SAB: 71, 73, 77–78, 80, 86–87, 89–90, 93–94, 98, 163, 193, 194, 199, 200–201, 207–210, 215–217, 219, 224, 232, 238, 271, 279, 288, 324, 334, 339, 340, 357, 371–373 TG: 163–165, 167–168, 171, 173–176, 177, 179–182, 183, 185, 187–192, 193, 195, 201, 203–206, 207, 209, 211, 215, 217–221, 341, 351, 354–358, 360, 362–364, 420, 426, 441, 450–456, 457, 464, 485, 499, 538–540, 549, 592, 600, 604, 608–612, 623–627, 667–669, 672 H/R: 90, 94, 96, 107, 111, 115, 131, 135, 206, 215, 223, 229
STATE GOAL 9: Use geometric methods to analyze, categorize and draw conclusions about points, lines, planes and space.	
A. Demonstrate and apply geometric concepts involving points, lines, planes and space.	
9.A.1a Identify related two- and three-dimensional shapes including circle-sphere, square-cube, triangle-pyramid, rectangle-rectangular prism and their basic properties.	SAB: 57–60, 67–68, 99, 112–115, 479, 481, 483, 493, 495, 497, 499, 501, 503–504, 546 TG: 140–143, 154–156, 158, 245–249, 251, 252, 874–876, 877, 888–890, 891, 892, 894–895, 897, 900–902, 903, 904 H/R: 39, 61, 285–289, 313

Houghton Mifflin Math Expressions
Grade 3
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Illinois Learning Standards for Mathematics

Illinois Learning Standards for Mathematics Early Elementary	<i>Houghton Mifflin Math Expressions</i>
9.A.1b Draw two-dimensional shapes.	SAB: 65–66, 68, 508 TG: 148–149, 155–156, 157, 252, 915, 937 H/R: 37, 39, 291
B. Identify, describe, classify and compare relationships using points, lines, planes and solids.	
9.B.1a Identify and describe characteristics, similarities and differences of geometric shapes.	SAB: 47–48, 53–56, 57–60, 65–66, 67–68, 70, 99, 108–109, 111–115, 120, 121–122, 479, 481, 483, 493, 495, 497, 499, 501, 503–504, 506 TG: 126–128, 130, 131, 134–136, 140–144, 145, 146, 148–150, 151, 154–156, 158, 162, 239–240, 241, 245–249, 251, 252, 254–256, 259, 260, 262–264, 874–876, 877, 881–884, 885, 888–890, 891, 892, 894–896, 900–902, 903 H/R: 33, 35–36, 39, 44, 54, 57, 59–60, 61–62, 285, 287, 289, 313
9.B.1b Sort, classify and compare familiar shapes.	SAB: 53–56, 57–60, 67–68, 70, 99, 111–115, 120, 121–122, 479, 481, 483, 493, 495, 497, 499, 501, 503–504, 506 TG: 134–136, 137, 140–144, 145, 148–150, 151, 154–156, 157, 158, 162, 239–240, 241, 244–249, 251, 254–256, 259, 260, 262–264, 888–890, 891, 892, 895, 897, 900–902, 903, 904 H/R: 33, 36, 39, 44, 54, 57, 61–62, 285, 287, 313
9.B.1c Identify lines of symmetry in simple figures and construct symmetrical figures using various concrete materials.	SAB: 100, 103–104, 109 TG: 231–234, 235, 236, 240 H/R: 57, 62, 100, 172, 212, 238
C. Construct convincing arguments and proofs to solve problems.	
9.C.1 Draw logical conclusions and communicate reasoning about simple geometric figures and patterns using concrete materials, diagrams and contemporary technology.	SAB: 53–56, 57–60, 67–68, 70, 99, 111–115, 120, 121–122, 479, 481, 483, 493, 495, 497, 499, 501, 503–504, 506 TG: 134–136, 137, 140–144, 145, 148–150, 151, 154–156, 157, 158, 162, 239–240, 241, 244–249, 251, 254–256, 259, 260, 262–264, 888–890, 891, 892, 895, 897, 900–902, 903, 904 H/R: 33, 36, 39, 44, 54, 57, 61–62, 285, 287, 313
D. Use trigonometric ratios and circular functions to solve problems.	
No benchmark expectations at this grade level.	

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STATE GOAL 10: Collect, organize and analyze data using statistical methods; predict results; and interpret uncertainty using concepts of probability.	
A. Organize, describe and make predictions from existing data.	
10.A.1a Organize and display data using pictures, tallies, tables, charts or bar graphs.	SAB: 145, 146, 147, 149, 150, 151, 153, 154, 167, 168, 169, 171, 172, 173, 189, 351, 427, 429, 431 TG: 80, 90, 318–324, 326–332, 334–338, 352, 360, 368, 370–376, 378–384, 386–390, 394, 410–411, 448, 475, 494, 502, 512, 517, 620, 640, 645, 647, 672, 680, 686, 695, 751, 756, 760, 762–763, 776–778, 788, 932 H/R: 79, 81, 83, 88, 90, 92, 93, 94, 95, 112, 136, 170, 212, 218, 234, 251, 258, 296
10.A.1b Answer questions and make predictions based on given data.	SAB: 145, 146, 147, 149, 150, 151, 153, 154, 167, 168, 169, 171, 172, 173, 189, 351, 427, 429, 431 TG: 318–324, 334–338, 352, 360, 368, 370–376, 378–384, 386–390, 410–411, 448, 475, 494, 502, 512, 517, 620, 640, 645, 647, 672, 680, 686, 695, 751, 756, 760, 762–763, 776–778, 788, 932 H/R: 79, 81, 83, 88, 90, 92, 112, 136, 170, 212, 218, 234, 251, 258, 296
B. Formulate questions, design data collection methods, gather and analyze data and communicate findings.	
10.B.1a Formulate questions of interest and design surveys or experiments to gather data.	SAB: 13, 169 TG: 334–335, 337, 374, 384, 386, 640
10.B.1b Collect, organize and describe data using pictures, tallies, tables, charts or bar graphs.	SAB: 153, 169 TG: 334–335, 337, 374, 384, 386, 640
10.B.1c Analyze data, draw conclusions and communicate the results.	SAB: 153, 169 TG: 334–335, 337, 374, 384, 386, 640
C. Determine, describe and apply the probabilities of events.	
10.C.1a Describe the concept of probability in relationship to likelihood and chance.	TG: 337, 776–780, 1006 H/R: 316
10.C.1b Systematically list all possible outcomes of a simple one-stage experiment (e.g., the flip of one coin, the toss of one die, the spin of a spinner).	TG: 35, 301, 365, 447, 475, 492, 777

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