Houghton Mifflin Harcourt
Math Expressions, Grade 3 © 2013

correlated to the

Pennsylvania Common Core Standards for Mathematics
Grade 3

Standard	Descriptor	Citations
Standards for Mathematical Practice		
•	Make sense of problems and persevere in solving them.	Representative Pages: SAB: 22, 48, 56, 64, 69, 70, 84, 86, 103, 127, 133, 145, 165, 186, 187, 188, 189, 197 TE: 27, 96, 113, 130, 147, 148, 160, 165, 205, 243, 253, 271, 284, 285, 309, 318, 334, 356, 360, 361, 367, 377, 383, 433, 546, 556, 558, 590, 592, 733
•	Reason abstractly and quantitatively.	Representative Pages: SAB: 20, 51, 85, 95, 102, 108, 111, 119, 120, 146, 163 TE: 21, 24, 25, 29, 91, 105, 164, 176, 185, 200, 216, 221, 234, 237, 272, 284, 285, 305, 414, 417, 425, 546, 562, 585, 589, 732
•	Construct viable arguments and critique the reasoning of others.	Representative Pages: SAB: 58, 105, 132, 163, 173, 190, 228, 230, 232, 238, 243, 275 TE: 115, 166, 207, 237, 252, 286, 306, 316, 327, 368, 404, 455, 464, 469, 482, 491, 508, 548, 589, 591, 596, 666, 734
•	Model with mathematics.	Representative Pages: SAB: 21, 43, 44, 68, 96, 128, 135, 153, 167, 172, 194, 201 TE: 23, 26, 85, 86, 142, 187, 189, 244, 259, 284, 317, 326, 333, 366, 373, 376, 385, 433, 546, 558, 588, 732
•	Use appropriate tools strategically.	Representative Pages: SAB: 15, 45, 73, 74, 91, 115, 116, 151, 154, 159, 160, 162 TE: 20, 76, 90, 102, 153, 154, 174, 175, 229, 235, 278, 285, 295, 297, 298, 300, 414, 417, 425, 430, 434, 547, 584, 733

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Standard	Descriptor	Citations
•	Attend to precision.	Representative Pages: SAB: 19, 57, 63, 98, 104, 106, 117–118, 129, 130, 193, 195 TE: 22, 114, 129, 138, 190, 206, 208, 215, 230, 238, 245, 246, 286, 341, 347, 372, 374, 431, 461, 548, 559, 563, 587, 593, 667, 670, 734
•	Look for and make use of structure.	Representative Pages: SAB: 52, 101, 112, 154, 200, 219, 221, 246, 261, 264 TE: 75, 78, 106, 112, 120, 139, 178, 195, 222, 285, 286, 307, 384, 416, 424, 426, 430, 432, 438, 492, 516, 517, 548, 555, 558, 560, 568, 585, 668, 734
•	Look for and make sense of regularity in repeated reasoning.	Representative Pages: SAB: 66, 67, 137, 271, 310 TE: 28, 79, 140, 141, 250, 265, 279, 286, 398, 404, 447, 540, 548, 557, 559, 561, 562, 564, 584, 586, 642, 675, 701, 720, 728, 734, 791, 812

Standard	Descriptor	Citations
2.1 Numbers and Operations		
2.1.3 *Pennsylvania's public schools shall teach, challenge, and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to:*		
(A) Counting & Cardinality		
	N/A	
(B) Numbers & Operations in Base Ten		
CC.2.1.3.B.1	Apply place-value understanding and properties of operations to perform multi-digit arithmetic. M03.A-T.1.1.1 M03.A-T.1.1.2 M03.A-T.1.1.3 M03.A-T.1.1.4	SAB: 6, 22, 28, 31–32, 34–35, 43, 48, 52, 56–58, 59–60, 63–64, 66–68, 69–70, 83–84, 92, 97–98, 102, 103–106, 108, 117–118, 127–130, 137–138, 149–150, 222, 229–230, 231–232, 233–234, 235–236, 237–238, 239–242, 243–244, 245–246, 247–248, 249–250, 251, 267–270, 275–276, 283–284 TE: 2–8, 23–30, 34–42, 46–52, 56–60, 64–70, 84–86, 90–96, 103–106, 110–116, 120–124, 128–130, 137–142, 146–148, 158–160, 178–179, 188–190, 194–200, 204–208, 212–216, 228–230, 242–246, 265–266, 276–280, 439–440, 460–464, 468–472, 476–478, 483–484, 488–494, 498–504, 508–510, 514–520, 524–526, 530–532, 536–540, 574–578, 596–598, 616–620
(C) Numbers & Operations — Fractions		
CC.2.1.3.C.1	Explore and develop an understanding of fractions as numbers. M03.A-F.1.1.1 M03.A-F.1.1.2 M03.A-F.1.1.3 M03.A-F.1.1.4 M03.A-F.1.1.5	SAB: 353–354, 355–358, 359–360, 361–362, 367–368 TE: 754–760, 764–772, 776–778, 782–786, 804–806

Standard	Descriptor	Citations
2.2 Algebraic Concepts		
2.2.3 *Pennsylvania's public schools shall teach, challenge, and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to:*		
(A) Operations and Algebraic Thinking		
CC.2.2.3.A.1	Represent and solve problems involving multiplication and division. M03.B-O.1.1.1 M03.B-O.1.1.2 M03.B-O.1.2.1 M03.B-O.1.2.2	SAB: 8–9, 21–22, 23–24, 26, 32, 34–36, 43–44, 48, 58, 59–60, 64, 69–70, 83–84, 97–98, 103–106, 117–118, 127–128, 133–134, 135–136, 145, 166, 167–168, 169–173, 175–176, 265–266, 269–270, 281–282, 283–284, 287–288 TE: 13–15, 26–27, 35–37, 39–42, 60, 67–70, 85–86, 96, 115, 123, 130, 147–148, 159–160, 188–190, 205–208, 230, 243–244, 253–254, 259–260, 271, 309–310, 317–318, 323–327, 332–334, 567–570, 575–578, 610–612, 616–620, 629–630
CC.2.2.3.A.2	Understand properties of multiplication and the relationship between multiplication and division. M03.B-O.2.1.1 M03.B-O.2.1.2 M03.B-O.2.2.1	SAB: 22, 23, 24, 25, 26, 31–32, 52, 63, 66–68, 92, 137–138, 245, 246 TE: 23–30, 34–42, 50, 56–60, 103–106, 129, 137–142, 178–179, 265–266, 514–517, 568
CC.2.2.3.A.3	Demonstrate multiplication and division fluency.	SAB: 6, 22–26, 28, 31–32, 34–35, 43, 48, 52, 56–58, 59–60, 63–64, 66–68, 69–70, 83–84, 92, 97–98, 102, 103–106, 108, 117–118, 127–130, 137–138, 149–150, 267–270 TE: 2–8, 23–30, 34–42, 46–52, 56–60, 64–70, 84–86, 90–96, 103–106, 110–116, 120–124, 128–130, 137–142, 146–148, 158–160, 178–179, 188–190, 194–200, 204–208, 212–216, 228–230, 242–246, 265–266, 276–280, 574–578

Standard	Descriptor	Citations
CC.2.2.3.A.4	Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.3.1.1 M03.B-O.3.1.2 M03.B-O.3.1.3 M03.B-O.3.1.4 M03.B-O.3.1.5 M03.B-O.3.1.6 M03.B-O.3.1.7	SAB: 5, 27, 28, 33, 34–35, 39, 45, 48, 55, 58, 63–64, 65, 66, 85, 91, 101, 107, 112, 127–130, 133–134, 135–136, 145, 151–152, 251–252, 281–282, 283–286, 287–288, 289–290, 292 TE: 2–5, 46–50, 51, 64–66, 67–69, 74–80, 90–93, 96, 110–112, 115–116, 129–130, 134–139, 140, 164, 174–180, 194–200, 212–216, 220–224, 243–246, 250–254, 259–260, 271–272, 278–280, 536–542, 610–612, 616–624, 629–630, 634–636, 640–641
2.3 Geometry		
2.3.3 *Pennsylvania's public schools shall teach, challenge, and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to:*		
(A) Geometry		
CC.2.3.3.A.1	Identify, compare, and classify shapes and their attributes. M03.C-G.1.1.1 M03.C-G.1.1.2	SAB: 296–300, 301–304, 305–308, 309–312 TE: 647–650, 653–656, 660–664, 668–670, 674–678
CC.2.3.3.A.2	Use the understanding of fractions to partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole. M03.C-G.1.1.3	SAB: 349–352, 353, 369–370 TE: 651–652, 742–750, 754–756, 810–811

Standard	Descriptor	Citations
2.4 Measurement, Data, and Probability		
2.4.3 Pennsylvania's public schools shall teach, challenge, and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to:		
(A) Measurement and Data		
CC.2.4.3.A.1	Solve problems involving measurement and estimation of temperature, liquid volume, mass, and length. M03.D-M.1.2.1 M03.D-M.1.2.2 M03.D-M.1.2.3	SAB: 163–166, 167–168, 169–174, 175–176, 315–318, 321, 323–324, 329–332, 339–340 TE: 304–310, 314–318, 322–328, 332–334, 682–688, 692–693, 695–696, 700–702, 712–714, 726–727
CC.2.4.3.A.2	Tell and write time to the nearest minute and solve problems by calculating time intervals. M03.D-M.1.1.1 M03.D-M.1.1.2	SAB: 182, 184, 185–186, 187–188, 189–190 TE: 341–342, 348, 352–356, 360–362, 366–368
CC.2.4.3.A.3	Solve problems and make change involving money using a combination of coins and bills. M03.D-M.1.3.1 M03.D-M.1.3.2 M03.D-M.1.3.3	This standard is outside the scope of *Math Expressions ©2012/13*.
CC.2.4.3.A.4	Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs. M03.D-M.2.1.1 M03.D-M.2.1.2 M03.D-M.2.1.3 M03.D-M.2.1.4	SAB: 28, 86, 154, 162, 199, 200, 201, 202, 203, 204, 205, 206, 208 TE: 51, 165, 285, 299–300, 382–384, 385–386, 387, 390, 391–392, 393, 396, 397–398, 399, 403, 404, 405

Standard	Descriptor	Citations
CC.2.4.3.A.5	Determine the area of a rectangle and apply the concept to multiplication and to addition. M03.D-M.3.1.1 M03.D-M.3.1.2	SAB: 51–52, 96–98, 315–318, 319–322 TE: 102–106, 187–190, 682–688, 692–696
CC.2.4.3.A.6	Solve problems involving perimeters of polygons and distinguish between linear and area measures. M03.D-M.4.1.1	SAB: 315–318, 321, 323–324, 329–332, 339–340 TE: 682–688, 692–693, 695–696, 700–702, 712–714, 726–727