New Mexico 3rd Grade Standards / *Excel* Math Correlation

Standards / Objectives	*Excel* Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
STRAND 1 - NUMBER AND OPERATIONS		
Benchmark 1: **Understand numbers, ways of representing numbers, relationships among numbers, and number systems.**		
1. Exhibit an understanding of the place-value structure of the base-ten number system by:		
a. Reading, modeling, writing, and interpreting whole numbers up to 10,000	1, 7, 9, 12, 14, 19, 23, 27, 29, 34, 43, 47, 49, 64, 67, 79, 90, 100, 104, 132, 133, 150	
b. Comparing and ordering numbers up to 1,000	2, 4, 6, 13, 21, 31, 38, 53, 57, 63, 98, 104	9, 30, 35, 57, 65, 82, 91, 93, 116, 123, 138
c. Recognizing the position of a given number in the base-ten number system and its relationship to benchmark numbers such as 10, 50, 100, 500	1, 3, 4, 6, 7, 12, 14, 19, 22, 23, 29, 34, 38, 43, 47, 49, 53, 61, 64, 67, 73, 90, 91, 95, 98, 100, 104, 132, 133	
2. Use whole numbers by using a variety of contexts and models (e.g., exploring the size of 1,000 by skip-counting to 1,000 using hundred charts or strips 10 or 100 centimeters long).	1, 2, 3, 6, 7, 13, 14, 19, 22, 23, 24, 27, 31, 34, 46, 49, 53, 64, 67, 73, 80, 90, 91, 97, 98, 101, 102, 103, 104, 117	
3. Identify some representations for some numbers and generate them by decomposing and recombining numbers (e.g., 853 = 8 x 100 + 5 x 10 + 3; 85 x 10 + 3 = 853; 853 = 900 – 50 + 3).	1, 7, 12, 19, 23, 27, 34, 43, 46, 47, 61, 64, 67, 100, 132, 133, 150	2, 6, 16, 21, 28, 36, 146
4. Identify the relationship among commonly encountered factors and multiples (e.g., factor pairs of 12 are 1 x 12, 2 x 6, 3 x 4; multiples of 12 are 12, 24, 36).	94, 111, 117, 118, 143, 153, 154 Fact families 45 Prime Factors 144	
5. Use visual models and other strategies to recognize and generate equivalents of commonly used fractions and mixed numbers (e.g., halves, thirds, fourths, sixths, eighths, and tenths).	31, 54, 66, *109, 140, 148	Activity 8
6. Demonstrate an understanding of fractions as parts of unit wholes, parts of a collection or set, and as locations on a number line.	31, 45, 58, 66, 82, 109, 137, 140, 147, 148 Add / Subtract 140	Activity 3, 8 (percent)

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7. Use common fractions for measuring and money (e.g., using fractions and decimals as representations of the same concept, such as half of a dollar = 50 cents).	*16, 22, 33, 44, 82, 146, 149 Ratios 126, 127 Decimal Addition / Subtraction 51, 96, 114, 146 Decimal Multiplication / Division 95, 134 Ratios: 126, 127	Decimal Addition 55, 92, 112, 122, 130, 137, 139, 152
Benchmark 2: Understand the meaning of operations and how they relate to one another.		
1. Use a variety of models to show an understanding of multiplication and division of whole numbers (e.g., charts, arrays, diagrams, and physical models [i.e., modeling multiplication with a variety of pictures, diagrams, and concrete tools to help students learn what the factors and products represent in various contexts]).	31, 58, 59, 61, 68, 71, 73, *80, 87, 88, 91, 93, 94, 95, 96, 97, 101, 102, 103, 111, 117, 118, 126, 127, 132, 133, 151, 153, 154	Activity 5, 9
2. Find the sum or difference of two whole numbers between 0 and 10,000.	1, 2, 3, 6, 7, 8, 9, 11 12, 13, 14, 16, 17, 19, 22, 23, 24, 26, 27, 28, 29, 31, 33, 34, 36, 37, 38, 39, 41, 42, 43, 44, 45, 47, 48, 51, 52, 56, 57, 58, 64, 67, 68, 69, 73, 74, 75, 76, 79, 81, 83, 84, 91, 92, 95, 96, 97, 98, 99, 105, 107, 113, 115, 121, 122, 123, 136, 151, 155	1, 2, 5, 6, 7, 9, 11, 12, 13, 16, 18, 19, 21, 22, 23, 24, 25, 26, 28, 31, 33, 35, 36, 38, 39, 40, 43, 44, 45, 48, 49, 52, 54, 56, 57, 62, 63, 65, 68, 69, 73, 77, 79, 81, 89, 91, 94, 97, 101, 102, 103, 105, 107, 110, 112, 114, 117, 119, 122, 123, 124, 125, 129, 130, 134, 137, 138, 139, 141, 143, 144, 145, 146, 149, 152, 154 Activity 5, 9
3. Solve simple multiplication and division problems (e.g., 135 ÷ 5 = □).	31, 39, 41, 42, 44, 46, 47, 48, 49, 51, 52, 53, 57, 58, 59, 61, 64, 67, 68, 69, 71, 72, 73, 74, 75, 76, 79, 81, 82, 83, 84, 86, 87, 88, 89, 91, 92, 94, 95, 96, 97, 98, 99, 101, 102, 103, 104, 105, 107, 111, 113, 117, 118, 119, 121, 124, 126, 127, 131, 136, 142, 143, 144, 146, 148, 151, 152, 153, 154	34, 70, 71, 73, 75, 83, 89, 94, 100, 101, 106, 107, 110, 114, 119, 124, 129, 134, 141, 149, 154
4. Identify how the number of groups and the number of items in each group equals a product.	31, 53, 58, 59, 61, 68, 71, 73, 74, 80, 87, 88, 91, 93, 95, 97, 101, 118, 126, 127, 153, 154	25, 45, 96, 135
5. Demonstrate the effects of multiplying and dividing on whole numbers (e.g., to find the total number of legs on 12 cats, 4 represents the number of each [cat] unit, so 12 x 4 = 48 [leg] units).	31, 39, 58, 71, 73, 80, 87, 88, 91, 96, 101, 102, 118, 126, 127, 132, 133, 153, 154	96, 106 Activity 5, 9

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6. Identify and use relationship between multiplication and division (e.g., division is the inverse of multiplication) to solve problems.	71, 96, 103, 117, 118, 132, 133, 134, 142, 151	
7. Select and use operations (e.g., addition, multiplication, subtraction, division) to solve problems.	2, 9, 11, 22, 32, 37, 40, 68, 75, 80, 83, 84, 85, 87, 88, 96, 98, 105, 114, 115, 121, 122, 123, 127, 137, 146, 151, 152	5, 7, 10, 12, 18, 22, 23, 25, 26, 29, 34, 38, 43, 52, 54, 62, 64, 69, 71, 81, 96, 97, 100, 102, 105, 106, 109, 112, 122, 128, 130, 135, 137, 139, 140, 143, 144, 152 Activity 5
Benchmark 3: Compute fluently and make reasonable estimates.		
1. Choose computational methods based on understanding the base-ten number system, properties of multiplication and division, and number relationships.	68, *71, 73, 75, 80, 87, 88, *91, *94, 95, 101, 102, 103, 111, 114, 118, 126, 127, 131, 132, 133, 142, 151, 153, 154	Activity 5, 9
2. Use strategies (e.g., 6 x 8 is double 3 x 8) to become fluent with the multiplication pairs up to 10 x 10.	39, 46, 71, 73, 80, 87, 88, 91, *96, *103, 113, 117, 118, 126, 127, 131, 142, 151, 153, 154	
3. Compute with basic number combinations (e.g., multiplication pairs up to 10 x 10 and their division counterparts).	39, 46, 71, 87, 88, 91, 96, 97, 113, 117, 118, 126, 127, 131, 142, 151, 153, 154	
4. Demonstrate reasonable estimation strategies for measurement, computation, and problem solving	*22, 60, 75, 85, 86, 90, 95, 108, 114, 115, 118, 134 Deductive Reasoning 25, 70, 110, 123	2, 6, 9, 13, 16, 21, 25, 28, 35, 36, 48, 55, 57, 65, 79, 91, 100, 102, 105, 112, 117, 123, 138, 140, 144 Activity 3 Deductive Reasoning 5, 7, 10, 20, 23, 27, 29, 32, 37, 42, 43, 47, 51, 53, 59, 61, 64, 66, 67, 74, 80, 84, 88, 97, 98, 99, 103, 108, 112, 113, 118, 120, 131, 133, 137, 139, 140, 142, 143, 148, 153 Activity 1, 5, 6, 9, 11

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STRAND 2 - ALGEBRA		
Benchmark 1: Understand patterns, relations, and functions.		
1. Represent relationships of quantities in the form of mathematical expressions, equations, or inequalities.	1, 4, 9, 11, 13, 14, 17, 21, 28, 32, 36, 57, 58, 71, 75, 80, 81, 83, 87, 88, 93, 107, 114, 121, 122	1, 11, 19, 24, 31, 33, 39, 40, 44, 49, 56, 63, 68, 70, 73, 75, 83, 85, 89, 94, 95, 101, 102, 107, 110, 114, 117, 119, 124, 125, 129, 134, 135, 141, 149, 154 Activity 5
2. Solve problems involving numeric equations.	1, 11, 13, 14, 17, 24, 28, 32, 36, 45, 53, 57, 58, 59, 71, 81, 83, 87, 88, 92, 99, 107, *114, 121, 122, 123	1, 11, 19, 24, 31, 33, 39, 40, 44, 49, 56, 63, 68, 70, 73, 75, 83, 85, 89, 94, 95, 101, 102, 107, 110, 114, 117, 119, 124, 125, 129, 134, 135, 141, 143, 149, 154 Activity 5, 9
3. Select appropriate operational and relational symbols to make an expression true (e.g., "If 4 □ 3 = 12, what operational symbol goes in the box?").	4, 11, 21, 26, 38, 76, 87, 88, 99, 113, 114, 122, 123	23, 95, 97, 102, 117, 128, 135, 143 Activity 5, 9
4. Use models of feet and inches to express simple unit conversions in symbolic form (e.g., 36 inches = 1 feet x 12) that develop conceptual understanding versus procedural skills.	*56, 74, 83, 121, *125	
5. Recognize and use the commutative property of multiplication (e.g., if 5 x 7 = 35, then what is 7 x 5?).	46, 71	
6. Create, describe, and extend numeric and geometric patterns including multiplication patterns	2, 6, 13, 26, 37, 38, 46, 48, 49, 53, 77, 80, 97, 113, 130, 155	45, 78
7. Represent simple functional relationships:		
a. Solve simple problems involving a functional relationship between two quantities (e.g., find the total cost of multiple items given the cost per unit)	26, 80, 87, 88, 126, 127, 151	
b. Extend and recognize a linear pattern by its rules (e.g., the number of legs on a given number of horses may be calculated by counting by 4s, by multiplying the number of horses by 4, or through the use of tables)	80, 126, 127, 155 Putting in Order 70	96, 106 Order 8, 14, 27, 32, 47, 53, 61, 66, 74, 88, 99, 108, 118

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Benchmark 2: Represent and analyze mathematical situations and structures using algebraic symbols.		
1. Determine the value of variables in missing part problems (e.g., 139 +□= 189).	36, 76, 81, 99, 107, 122	1, 11, 19, 24, 31, 39, 40, 44, 49, 56, 63, 68, 70, 73, 75, 77, 83, 85, 89, 94, 101, 107, 110, 114, 119, 124, 129, 134, 141, 149, 154
2. Recognize and use the commutative and associative properties of addition and multiplication (e.g., "If 5 x 7 = 35, then what is 7 x 5? And if 5 x 7 x 3 = 105, then what is 7 x 3 x 5?").	6, 13, 17, 24, 39, 45, 46, 53, 71, 73, 91, 131	
3. Explore the ways that commutative, distributive, identity, and zero properties are useful in computing with numbers.	6, 13, 17, 24, 28, 39, 46, 59, 71 Order of Operations 92, 107	
Benchmark 3: Use mathematical models to represent and understand quantitative relationships.		
1. Model problem situations with objects and use representations such as pictures, graphs, tables, and equations to draw conclusions.	11, 13, 14, 15, 17, 25, 31, 59, 80, 87, 88, 93, 101, 102, 103, 126, 155	23, 29, 97, 135, 143
2. Solve problems involving proportional relationships including unit pricing (e.g., four apples cost 80 cents; therefore, one apple costs 20 cents).	1, 26, 80, 87, 88, 126	135
3. Describe relationships of quantities in the form of mathematical expressions, equations, or inequalities.	1, 4, 9, 11, 13, 14, 17, 21, 28, 32, 36, 57, 58, 71, 75, 80, 81, 83, 87, 88, 93, 107, 121, 122	1, 11, 19, 24, 31, 33, 39, 40, 44, 49, 56, 63, 68, 70, 73, 75, 83, 85, 89, 94, 95, 101, 102, 107, 110, 114, 117, 119, 124, 125, 129, 134, 135, 141, 149, 154 Activity 5
4. Select appropriate operational and relational symbols to make an expression true (e.g.," If 4 □ 3 = 12, what operational symbol goes in the box?").	4, 11, 21, 26, 38, 76, 87, 88, 99, 113, 122	23, 95, 97, 102, 117, 128, 135, 143 Activity 5, 9
Benchmark 4: Analyze changes in various contexts.		
1. Demonstrate how change in one variable can relate to a change in a second variable (e.g., input-output machines, data tables).	80, 126	Activity 10

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STRAND 3 - GEOMETRY		
Benchmark 1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.		
1. Describe and compare the attributes of plane and solid geometric figures to show relationships and solve problems:		
a. Identify, describe, and classify polygons (e.g., pentagons, hexagons, and octagons)	8, 41, 77, 106, 116, 120, 124, 129, 139 Circle 119	1, 4, 17, 41, 46, 50, 58, 60, 72, 76, 77, 86, 87, 104, 111 115, 126, 136, 147, 151 Activity 2, 3
b. Identify lines of symmetry in two-dimensional shapes	55, *120	
c. Explore attributes of quadrilaterals (e.g., parallel and perpendicular sides for the parallelogram, right angles for the rectangle, equal sides and right angles for the square)	8, 41, 77, 106, 116, 124, 128, 129, 138, 139	60 Activity 2, 3, 10
d. Identify right angles	41, 128, 138	
e. Identify, describe, and classify common three-dimensional geometric objects (e.g., cube, rectangular solid, sphere, prism, pyramid, cone, cylinder)	69, 135, 141, 145	90, 132, 150 Activity 7, 11
BENCHMARK 2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems.		
1. Describe location and movement using common language and geometric vocabulary (e.g., directions from classroom to gym).	10, 120	4, 17, 46, 50, 58, 72, 76, 87, 90, 104, 111, 115, 126, 132, 136, 147 Activity 2
2. Use ordered pairs to graph, locate specific points, create paths, and measure distances within a coordinate grid system.		Activity 4, 10
3. Use a two-dimensional grid system (e.g., a map) to locate positions representing actual places.	*10	Activity 4

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Benchmark 3: Apply transformations and use symmetry to analyze mathematical situations.		
1. Predict and describe the results of sliding, flipping, and turning two-dimensional shapes.	120	46, 72, 126
2. Identify and describe the line of symmetry in two- and three-dimensional shapes.	55	
Benchmark 4: Use visualization, spatial reasoning, and geometric modeling to solve problems.		
1. Visualize, build, and draw geometric objects.	*8, *41, 69, 77, *106, 119, *120, *139, 141	4, 17, 50, 60, 76, 86, 87, 90, 104, 111, 115, 126, 132, 136, 147, 150, 151 Activity 2, 3, 7
2. Create and describe mental images of objects, patterns, and paths.	2, 8, 77, 130	4, 17, 41, 150 Activity 1, 2, 3, 7
3. Recognize geometric shapes and structures (e.g., in the environment).	*8, 69	Activity 1
4. Use geometric models to solve problems in other areas of mathematics (e.g., using arrays as models of multiplication or area).	*72, 126, 141	150 Activity 2, 3, 7
5. Identify and build three-dimensional objects from two-dimensional representations of that object.	*69, 141	90, 132, 150 Activity 7, 12
6. Investigate two-dimensional representations of three-dimensional shapes	69, 141, 145	90, 132, 150
7. Explore geometric ideas and relationships as they apply to other disciplines and to problems that arise in the classroom or in everyday life.	69	Activity 1, 11

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STRAND 4 - MEASUREMENT		
Benchmark 1: Understand measurable attributes of objects and the units, systems, and process of measurement.		
1. Demonstrate understanding of the need for measuring with standard units and become familiar with standard units in the U.S. customary system.	32, 50, 56, 62, 63, 74, 83, 86, 108, 116, 121, 125	109, 117, 121, 127, 128, 140, 142
2. Choose and use the appropriate units and measurement tools to quantify the properties of objects (e.g., length [ruler], width [ruler], or mass [balance scale]).	*32, 50, 56, 62, *74, 83, 108, 125	109, 117, 121, 127, 128, 140, 142
3. Identify time to the nearest minute (elapsed time) and relate time to everyday events.	18, 65, 78, 83, 89, 112, 152	3, 14, 32, 38, 54, 64
4. Identify and use time intervals (e.g., hours, days, weeks, months, years).	26, 27, 84	12, 22, 32, 38, 54
5. Identify properties (e.g., length, area, weight, volume) and select the appropriate type of unit for measuring each property.	32, 50, 56, 62, 63, 72, 74, 83, 108, 121, 124, 125, 135, 145 Perimeter 86, 116, 135, 145 Volume 135, 145	29, 109, 117, 121, 127, 128, 140, 142 Perimeter 145, 150 Activity 3, 7
6. Demonstrate understanding that measurements are approximations, investigate differences in units and their effect on precision, and consider the degree of accuracy for different situations.	*32,*50, 56, *62, 63, *83, 86, 108 Range 85	109, 117, 121, 127, 128, 140, 142 Activity 3
Benchmark 2: Apply appropriate techniques, tools, and formulas to determine measurements.		
1. Find the area of rectangles using appropriate tools (e.g., grid paper, tiles).	72, 124, 135, 145 Volume 135, 145 Perimeter 86, 116, 135, 145	Activity 3, 7 (Surface Area / Volume) Perimeter 145, 150
2. Estimate measurements.	56, 63, 108	109, 117, 121, 127, 128, 140, 142 Activity 3
3. Use appropriate standard units and tools to estimate, measure, and solve problems (e.g., length, area, weight).	56, 62, 63, 72, 83, 89, 108	109, 117, 121, 127, 128, 140, 142 Activity 3
4. Recognize a 90-degree angle and use it as a strategy to estimate the size of other angles.	*8, *124, *138	

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STRAND 5 - DATA ANALYSIS AND PROBABILITY		
Benchmark 1: **Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.**		
1. Collect and organize data using observations, measurements, surveys, or experiments.	5, 15, 30, *123	23, 97, 143 Activity 1, 10, 11
2. Represent data using tables and graphs (e.g., line plots, bar graphs, and line graphs).	5, 25, *30, *123, 126	23, 97, 143 Activity 10
3. Conduct simple experiments by determining the number of possible outcomes and make simple predictions:		
a. Identify whether events are certain, likely, unlikely, or impossible	5, *20	
b. Record the outcomes for a simple event and keep track of repetitions	5, *20 Combinations 30, 123	
c. Summarize and record the results in a clear and organized way use the results to predict future events	5, 30, 123	23, 97, 143
Benchmark 2: **Select and use appropriate statistical methods to analyze data.**		
1. Apply and explain the uses of sampling techniques (e.g., observations, polls, tally marks) for gathering data.	*5, 20, 25, 30	Activity 1, 10
Benchmark 3: **Develop and evaluate inferences and predictions that are based on data.**		
1. Analyze data displayed in a variety of formats to make reasonable inferences and predictions, answer questions, and make decisions.	5, 15, 20, 30, 25, 30, 35, 80, 126	23, 97, 143 Activity 1, 10
Benchmark 4: **Understand and apply basic concepts of probability.**		
1. Discuss the degree of likelihood of events and use terminology such as “certain,” “likely,” “unlikely”.	5, *20	
2. Predict the outcomes of simple experiments (e.g., coin tossing) and test the predictions using concrete objects (e.g., coins, counters, number cubes, spinners).	5, 20	
3. Record the probability of a specific outcome for a simple probability situation (e.g., probability is three out of seven for choosing a black ball; 3/7).	5, 20	

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