Michigan 4th Grade Standards / *Excel* Math Correlation

Standards / Objectives	*Excel* Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers

STRAND 1 NUMBER and OPERATIONS

Understand and use number notation and place value

N.ME.04.01 Read and write numbers to 1,000,000; relate them to the quantities they represent; compare and order.	1, 3, 7, 8, 17, 22, 46, 51, 61, 74, 85, 102, 103, 113, 117, 126, 129, 133	7, 8, 11, 13, 17, 21, 63, 68, 90, 92, 96, 102, 105, 106, 113, 122, 126, 132, 153
N.ME.04.02 Compose and decompose numbers using place value to 1,000,000's, e.g., 25,068 is 2 ten thousands, 5 thousands, 0 hundreds, 6 tens, and 8 ones.	1, 3, 6, 7, 23, 27, 28, 42, 43, 48, 50, 52, 53, 126	128, 143 Activity 12
N.ME.04.03 Understand the magnitude of numbers up to 1,000,000; recognize the place values of numbers and the relationship of each place value to the place to its right, e.g., 1,000 is 10 hundreds.	1, 3, 6, 7, 23, 27, 28, 42, 43, 48, 50, 52, 53, 126	128, 143 Activity 12

Use factors and multiples

N.ME.04.04 Find all factors of any whole number through 50, list factor pairs, and determine if a one-digit number is a factor of a given whole number.	12, 21, 70, 73, 87, 91, 93, 94, 106, 135	
N.ME.04.05 List the first ten multiples of a given one-digit whole number; determine if a whole number is a multiple of a given one-digit whole number.	22, 33, 49, 51, 56, 89, 91, 151	115, 117
N.MR.04.06 Know that some numbers including 2, 3, 5, 7, and 11 have exactly two factors (1 and the number itself) and are called prime numbers.	94, 135	
N.MR.04.07 Use factors and multiples to compose and decompose whole numbers.	*22, 51, 89, 151	115, 117

Add and subtract whole numbers

N.FL.04.08 Add and subtract whole numbers fluently.	1, 2, 3, 6, 7, 8, 9, 11, 13, 14, 24, 26, 31, 36, 49, 69, 77, 104, 111, 113, 117, 126, 129	3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 17, 18, 19, 21, 25, 26, 31, 33, 35, 39, 43, 47, 48, 52, 56, 62, 75, 76, 77, 80, 83, 87, 89, 90, 92, 93, 95, 102, 105, 106, 113, 116, 122, 124, 125, 126, 128, 129, 130, 136, 138, 142, 143, 147, 155 Activity 11

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Multiply and divide whole numbers		
N.ME.04.09 Multiply two-digit numbers by 2, 3, 4, and 5 using the distributive property, e.g., 21 x 3 = (1 + 20) x 3 = (1 x 3) + (20 x 3) = 3 + 60 = 63.	Non-Distributive: 47, 62, 84 Distributive Property 108 Commutative Property 72	
N.FL.04.10 Multiply fluently any whole number by a one-digit number and a three-digit number by a two-digit number; for a two-digit by one-digit multiplication use distributive property to develop meaning for the algorithm.	12, 13, 14, 17, 18, 19, 21, 22, 23, 24, 31, 32, 36, 43, 46, 47, 48, 49, 51, 52, 53, 59, 61, 62, 63, 64, 71, 72, 73, 76, 77, 78, 81, 84, 87, 91, 93, 98, 102, 103, 116, 129, 131, 132, 138, 141, 146, 151	15, 19, 31, 41, 45, 56, 67, 69, 80, 89, 93, 96, 104, 109, 117, 125, 129, 132, 142, 148, 155 Activity 8, 11
N.FL.04.11 Divide numbers up to four-digits by one-digit numbers and by 10.	17, 21, 23, 24, 26, 27, 28, 29, 31, 33, 36, 42, 43, 46, 47, 48, 49, 51, 52, 53, 54, 56, 59, 61, 62, 64, 66, 70, 71, 73, 74, 76, 77, 78, 79, 81, 82, 83, 84, 87, 89, 91, 92, 93, 94, 96, 98, 101, 102, 103, 108, 112, 114, 116, 117, 122, 124, 129, 131, 132, 136, 138, 141, 142, 149, 151, 153, 154	31, 39, 41, 69, 75, 89, 99, 104, 109, 117, 121, 125, 148, 153 Activity 8, 11
N.FL.04.12 Find the value of the unknowns in equations such as a ÷ 10 = 25; 125 ÷ b = 25.	14, 22, 34, 35, 74, 87, 134, 152 Pre-Algebra 25, 34, 74, 152	9, 15, 19, 31, 39, 45, 52, 56, 67, 69, 75, 80, 89, 93, 99, 104, 109 Activity 8, 11
N.MR.04.13 Use the relationship between multiplication and division to simplify computations and check results.	21, 24, 27, 28, 42, 43, 49, 52, 53, 59, 73, 82, 83, 87, 89, 138, 151	
N.MR.04.14 Solve contextual problems involving whole number multiplication and division.	Addition / Subtraction 1, 9, 26, 41, 77, 129 Multiplication / Division 31, 33, 54, 56, 72, 90, 92, 109, 111, 121, 122, 123, 124, 132, 139	Addition / Subtraction 5, 10, 12, 18, 22, 33, 35, 43, 47, 48, 62, 76, 77, 83, 87, 91, 101, 103, 116, 124, 130, 133, 136, 138, 146, 147 Multiplication / Division 14, 16, 27, 29, 41, 55, 59, 70, 71, 79, 111, 114, 115, 117, 118, 121, 125, 148, 153, 155 Activity 1, 6

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Read, interpret and compare decimal fractions		
N.ME.04.15 Read and interpret decimals up to two decimal places; relate to money and place value decomposition.	9, 11, 16, 26, 55, 61, 100, 104, 105, 115, 137, 138, 141	146
N.ME.04.16 Know that terminating decimals represents fractions whose denominators are 10, 10 x 10, 10 x 10 x 10, etc., e.g., powers of 10.	100, 115, 118, *131, 137, 148	
N.ME.04.17 Locate tenths and hundredths on a number line.	55, *100, *104, *105, *115, *118, *131, *137, 145	
N.ME.04.18 Read, write, interpret, and compare decimals up to two decimal places.	55, 100, 105, 115, 131, 137, 141, 142	
N.MR.04.19 Write tenths and hundredths in decimal and fraction forms, and know the decimal equivalents for halves and fourths.	*75, 100, 118, 137, 148	
Understand fractions		
N.ME.04.20 Understand fractions as parts of a set of objects.	15, 16, 17, 54, 67, 75, 76, 79, 81, 99, 110, 114, 137 Ratios 56	
N.MR.04.21 Explain why equivalent fractions are equal, using models such as fraction strips or the number line for fractions with denominators of 12 or less, or equal to 100.	75, 95, 99, 110, 118, 125, 127, 128	
N.MR.04.22 Locate fractions with denominators of 12 or less on the number line; include mixed numbers.	*15, *16, *54, *67, *75, *79, *95, *99, *110, *114, *118, *125, *127, *128, 145	
N.MR.04.23 Understand the relationships among halves, fourths, and eighths and among thirds, sixths, and twelfths.	16, 54, 75, 79, 81, 95, 99, 110, 125, *127, *128, 136	
N.ME.04.24 Know that fractions of the form m/n where m is greater than n, are greater than 1 and are called improper fractions; locate improper fractions on the number line.	88, 95, 112	
N.MR.04.25 Write improper fractions as mixed numbers, and understand that a mixed number represents the number of "wholes" and the part of a whole remaining, e.g., 5/4 = 1 + 1/4 = 1 1/4 .	81, 88, 95, 112, 118	

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N.MR.04.26 Compare and order up to three fractions with denominators 2, 4, and 8, and 3, 6, and 12, including improper fractions and mixed numbers.	79, 95, 125, 145 Fractions / Decimals: 85, 148 Fractions / Percents: 127, 128, 136, 143	
Add and subtract fractions		
N.MR.04.27 Add and subtract fractions less than 1 with denominators through 12 and/or 100, in cases where the denominators are equal or when one denominator is a multiple of the other, e.g., $1/12 + 5/12 = 6/12$; $1/6 + 5/12 = 7/12$; $3/10 - 23/100 = 7/100$.	16, 67, 76	
N.MR.04.28 Solve contextual problems involving sums and differences for fractions where one denominator is a multiple of the other (denominators 2 through 12, and 100).	*15, 75 Multiplication / Division: 143	
N.MR.04.29 Find the value of an unknown in equations such as $1/8 + x = 5/8$ or $3/4 - y = 1/2$.	*16, 67, *75, *76	Activity *8, *11
Multiply fractions by whole numbers		
N.MR.04.30 Multiply fractions by whole numbers, using repeated addition and area or array models.	99, 118, 127, 128, 143, 153, 154 Divide: 110, 128, 148	
Add and subtract decimal fractions		
N.MR.04.31 For problems that use addition and subtraction of decimals through hundredths, represent with mathematical statements and solve.	11, 26, 86, 104	20, 28, 30, 91, 101, 103, 111, 114, 146 Activity 6
N.FL.04.32 Add and subtract decimals through hundredths.	11, 26, 86, 104	20, 28, 30, 91, 101, 103, 111, 114, 146 Activity 6
Multiply and divide decimal fractions		
N.FL.04.33 Multiply and divide decimals up to two decimal places by a one-digit whole number where the result is a terminating decimal, e.g., $0.42 \div 3 = 0.14$, but not $\underline{5} \div 3 = 1.6$.	61, 107, 109, 115, 116, 139, 141, 142	114

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Estimate		
N.FL.04.34 Estimate the answers to calculations involving addition, subtraction, or multiplication.	45, 55, 69, 104, 129	8, 15, 19, 21, 31, 39, 45, 52, 56, 75, 80, 89, 93, 96, 99, 104, 109, 113, 122
N.FL.04.35 Know when approximation is appropriate and use it to check the reasonableness of answers; be familiar with common place-value errors in calculations.	45, 55, 69, 104, 129	8, 15, 19, 21, 31, 39, 45, 52, 56, 75, 80, 89, 93, 96, 99, 104, 109, 113, 122
N.FL.04.36 Make appropriate estimations and calculations fluently with whole numbers using mental math strategies.	45, 55, 69, 104, 129	8, 15, 19, 21, 31, 39, 45, 52, 56, 75, 80, 89, 93, 96, 99, 104, 109, 113, 122
STRAND 3 MEASUREMENT		
Measure using common tools and appropriate units		
M.UN.04.01 Measure using common tools and select appropriate units of measure.	29, 30, 37, 70	23
M.PS.04.02 Give answers to a reasonable degree of precision in the context of a given problem.	29, 37, 63, 70, 121	23, 49, 118, 125, 135 Activity 10
M.UN.04.03 Measure and compare integer temperatures in degrees.	30, 133	
M.TE.04.04 Measure surface area of cubes and rectangular prisms by covering and counting area of the faces.	149	Activity 10
Convert measurement units		
M.TE.04.05 Carry out the following conversions from one unit of measure to a larger or smaller unit of measure: meters to centimeters, kilograms to grams, liters to milliliters, hours to minutes, minutes to seconds, years to months, weeks to days, feet to inches, ounces to pounds (using numbers that involve only simple calculations).	18, 19, *29, 37, 57, 63, 66, 68, 73, 90, 111, 121, 123, 124 Union / Intersection of Sets: 44 Distance / Speed: 92	118, 125

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Use perimeter and area formulas		
M.TE.04.06 Know and understand the formulas for perimeter and area of a square and a rectangle; calculate the perimeters and areas of these shapes and combinations of these shapes using the formulas.	64, 68, 96, 120, 147, 149, 155 Volume: 95, 105	118, 125, 135, 137, 150 Activity 7 Capacity: 23 Weight: 49, 87, 95, 133, 134, 139, 144, 149, 154
M.TE.04.07 Find one dimension of a rectangle given the other dimension and its perimeter or area.	64, 68, 96, 120	125, 135, 137, 150 Activity 7
M.TE.04.08 Find the side of a square given its perimeter or area.	*64, *68, 96, 120	135, 137, 150 Activity 7
M.PS.04.09 Solve contextual problems about perimeter and area of squares and rectangles in compound shapes.	68, 147	118, 125, 135, 137, 150
Understand right angles		
M.TE.04.10 Identify right angles and compare angles to right angles.	70, 78, 98, 132	
Problem-solving		
M.PS.04.11 Solve contextual problems about surface area.	149	135 Activity 10

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STRAND 4 GEOMETRY		
Understand perpendicular, parallel, and intersecting lines		
G.GS.04.01 Identify and draw perpendicular, parallel, and intersecting lines using a ruler and a tool or object with a square (90º) corner.	38, 70, 71, 121 Coordinate Points: 65, 97, 120, 130, 140, Activity 5	
Identify basic geometric shapes and their components, and solve problems		
G.GS.04.02 Identify basic geometric shapes including isosceles, equilateral, and right triangles, and use their properties to solve problems.	15, 39, 58, 71, 96, 98, 101, 120, 132, 144, 147, 155	4, 24, 32, 36, 44, 53, 58, 60, 65, 66, 78, 82, 94, 99, 107, 110, 119, 123, 131 Activity 3, 4, 10
G.SR.04.03 Identify and count the faces, edges, and vertices of basic three-dimensional geometric solids including cubes, rectangular prisms, and pyramids; describe the shape of their faces.	40, 149	140, 141 Activity 9
Recognize symmetry and transformations		
G.TR.04.04 Recognize plane figures that have line symmetry.	30	
G.TR.04.05 Recognize rigid motion transformations (flips, slides, turns) of a two-dimensional object.	60	36, 53, *140, *141 Activity *3
STRAND 5 DATA and PROBABILITY		
Represent and solve problems for given data		
D.RE.04.01 Construct tables and bar graphs from given data.	25, 56	86, 97, 112, 145, 151 Graphing Activity 1, 2, 3, 4, 5, 6
D.RE.04.02 Order a given set of data, find the median, and specify the range of values.	69, 150 Averages 122	145
D.RE.04.03 Solve problems using data presented in tables and bar graphs, e.g., compare data represented in two bar graphs and read bar graphs showing two data sets.	5, 20, 25, 56, 80, 119 Deductive Reasoning 4, 10, 41	86, 97, 112, 145, 151 Graphing Activity: 1, 2, 3, 4, 5, 6 Deductive Reasoning: 1, 2, 5, 34, 37, 38, 40, 42, 46, 50, 51, 54, 57, 61, 64, 72, 73, 74, 81, 84, 88, 98, 108, 120, 127, 134, 139, 144, 149, 152, 154, Activity 2 Possibilities 85, Activity 1