

Standards / Objectives	<i>Excel Math</i> Lesson Numbers	Activity Numbers
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NUMBER AND OPERATIONS

Understand numbers, ways of representing numbers, relationships among numbers, and number systems

<ul style="list-style-type: none"> Count with understanding and recognize "how many" in sets of objects; 	1, 2, 3, 4, 5, 6, 7, 11, 12, 13, 16, 17, 18, 19, 21, 22, 23, 24, 28, 31, 32, 33, 34, 36, 37, 41, 42, 43, 44, 46, 47, 48, 54, 57, 58, 61, 63, 67, 69, 70, 72, 74, 82, 86, 94, 98, 109, 113, 130, 147	2, 4, 17, 18, 31, 47 Exercise: 1
<ul style="list-style-type: none"> Use multiple models to develop initial understandings of place value and the base-ten number system; 	35, 41, 48, 49, 58, 63, 64, 69, 70, 72, 74, 80, 82, 86, 96, 97, 110, 111, 113, 122, 123, 130, 136, 137, 147 Money: 23, 29, 51, 68	33, 111 Money: 68
<ul style="list-style-type: none"> Develop understanding of the relative position and magnitude of whole numbers and of ordinal and cardinal numbers and their connections; 	5, 10, 11, 12, 17, 19, 59, 91, 102, 106, 112, 121, 124, 131, 132	11, 12, 33, 111, 131 Exercise: 1, 2
<ul style="list-style-type: none"> Develop a sense of whole numbers and represent and use them in flexible ways, including relating, composing, and decomposing numbers; 	1, 2, 3, 4, 5, 7, 10, 11, 12, 14, 17, 18, 19, 28, 31, 34, 35, 37, 52, 53, 58, 63, 69, 70, 72, 74, 80, 81, 89, 90, 102, 106, 110, 111, 112, 116, 121, 124, 126, 129, 130, 133, 144	2, 3, 4, 11, 12, 18, 31, 33, 111, 132 Exercise: 1, 2
<ul style="list-style-type: none"> Connect number words and numerals to the quantities they represent, using various physical models and representations; 	2, 46, 47, 82, 93, 94, 98, 109, 113, 118	46, 82, 114 Exercise: 4, 6
<ul style="list-style-type: none"> Understand and represent commonly used fractions, such as $\frac{1}{4}$, $\frac{1}{3}$, and $\frac{1}{2}$. 	107, 108, 119, 128, 148 Add / Subtract: 155	

Understand meanings of operations and how they relate to one another

<ul style="list-style-type: none"> Understand various meanings of addition and subtraction of whole numbers and the relationship between the two operations; 	71, 72, 88, 93, 103, 104, 106, 116, 127	73, 117
<ul style="list-style-type: none"> Understand the effects of adding and subtracting whole numbers; 	14, 15, 18, 22, 28, 29, 30, 31, 34, 35, 37, 38, 39, 41, 43, 44, 48, 49, 51, 54, 57, 58, 64, 67, 71, 72, 74, 78, 79, 88, 89, 92, 93, 96, 97, 99, 103, 104, 106, 110, 111, 116, 117, 122, 123, 126, 129, 136, 137, 141, 146, 147, 149	18, 27, 31, 69, 73, 117, 118, 123



NCTM 1st Grade Standards / *Excel Math* Correlation

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<ul style="list-style-type: none"> Understand situations that entail multiplication and division, such as equal groupings of objects and sharing equally. 	107, 108, 119, 131, 148, 155	
Compute fluently and make reasonable estimates		
<ul style="list-style-type: none"> Develop and use strategies for whole-number computations, with a focus on addition and subtraction; 	14, 15, 18, 22, 28, 29, 30, 31, 32, 34, 35, 37, 38, 39, 41, 43, 44, 45, 48, 49, 51, 54, 57, 64, 67, 71, 72, 74, 78, 79, 85, 88, 89, 92, 93, 96, 97, 99, 103, 104, 106, 110, 111, 114, 116, 117, 122, 123, 126, 129, 136, 137, 139, 141, 142, 146, 147, 149,	18, 27, 31, 58, 69, 73, 117, 118, 123, 127
<ul style="list-style-type: none"> Develop fluency with basic number combinations for addition and subtraction; 	31, 33, 36, 38, 41, 42, 43, 46, 48, 53, 56, 58, 61, 63, 66, 68, 71, 72, 78, 79, 81, 83, 84, 86, 88, 89, 91, 93, 96, 97, 98, 103, 106, 109, 110, 113, 116, 118, 126, 127, 128, 133, 141, 142, 143, 146, 149	18, 27, 31, 58, 69, 73, 117, 118, 123, 127
<ul style="list-style-type: none"> Use a variety of methods and tools to compute, including objects, mental computation, estimation, paper and pencil, and calculators. 	14, 15, 18, 22, 28, 29, 30, 31, 32, 34, 35, 37, 38, 39, 41, 43, 44, 45, 48, 49, 51, 54, 57, 58, 66, 67, 71, 72, 74, 78, 79, 85, 88, 89, 92, 93, 96, 97, 99, 103, 104, 106, 110, 111, 114, 116, 122, 123, 126, 129, 136, 137, 139, 141, 142, 146, 147, 149	18, 27, 31, 58, 69, 73, 117, 118, 123, 127

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ALGEBRA		
Understand patterns, relations, and functions		
<ul style="list-style-type: none"> Sort, classify, and order objects by size, number, and other properties; 	7, 76 Money: 23, 29, 51, 68, 154 Events: 105, 108	2, 4, 16, 17, 34, 37, 51, 54, 93, 104, 113, 137, 143, 147 Money: 68, 81, 83, 84, 128, 144 Events: 44, 76, 139
<ul style="list-style-type: none"> Recognize, describe, and extend patterns such as sequences of sounds and shapes or simple numeric patterns and translate from one representation to another; 	5, 10, 17, 19, 25, 36, 40, 61, 70, 72, 74, 82, 90, 102, 106, 112, 124, 130, 133, 144	6, 8, 9, 19, 22, 23, 51, 56, 59, 78, 87, 98, 154
<ul style="list-style-type: none"> Analyze how both repeating and growing patterns are generated. 	5, 10, 17, 19, 25, 36, 61, 72, 90, 102, 106, 112, 124, 130, 133, 144	6, 8, 9, 19, 23, 51, 56, 59, 78, 87, 98, 154
Represent and analyze mathematical situations and structures using algebraic symbols		
<ul style="list-style-type: none"> Illustrate general principles and properties of operations, such as commutativity, using specific numbers; 	7, 71, 72, 93, 106	
<ul style="list-style-type: none"> Use concrete, pictorial, and verbal representations to develop an understanding of invented and conventional symbolic notations. 	7, 14, 15, 18, 22, 30, 31, 32, 35, 38, 39, 45, 57, 60, 66, 67, 72, 78, 79, 85, 89, 92, 101, 103, 104, 117, 121, 122, 127, 141, 142	73 Exercise 6, 10
Use mathematical models to represent and understand quantitative relationships		
<ul style="list-style-type: none"> Model situations that involve the addition and subtraction of whole numbers, using objects, pictures, and symbols. 	14, 15, 18, 22, 28, 29, 30, 31, 32, 34, 35, 38, 39, 41, 43, 44, 45, 51, 54, 57, 58, 60, 66, 67, 70, 74, 78, 79, 85, 88, 89, 92, 97, 100, 101, 103, 104, 106, 110, 111, 117, 122, 123, 139, 141, 142, 146, 147	18, 27, 31, 62, 69, 73
Analyze change in various contexts		
<ul style="list-style-type: none"> Describe qualitative change, such as a student's growing taller; 		Exercise 11
<ul style="list-style-type: none"> Describe quantitative change, such as a student's growing two inches in one year. 		Exercise 11

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GEOMETRY

Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships

<ul style="list-style-type: none"> Recognize, name, build, draw, compare, and sort two- and three-dimensional shapes; 	8, 9, 25, 65, 75, 125, 128, 135, 140, 150, 151	7, 26, 28, 49, 51, 57, 61, 88, 97, 101, 103, 107, 109, 112, 119, 121, 124, 126, 129, 133, 148, 152, 153 Exercise 3, 4, 7
<ul style="list-style-type: none"> Describe attributes and parts of two- and three-dimensional shapes; 	8, 9, 65, 75, 125, 135, 140, 150, 151	7, 26, 38, 49, 61, 88, 101, 103, 107, 109, 119, 126, 129, 148, 152 Exercise 3, 4, 7
<ul style="list-style-type: none"> Investigate and predict the results of putting together and taking apart two- and three-dimensional shapes. 	125, 135	7, 49, 57, 61, 88, 97, 101, 103, 107, 109, 112, 119, 121, 124, 126, 129, 133, 152, 153

Specify locations and describe spatial relationships using coordinate geometry and other representational systems

<ul style="list-style-type: none"> Describe, name, and interpret relative positions in space and apply ideas about relative position; 	20, 125	22, 28, 36, 38, 57, 72, 74, 77, 79, 88, 89, 92, 97, 101, 103, 107, 109, 112, 126, 129 Exercise 3
<ul style="list-style-type: none"> Describe, name, and interpret direction and distance in navigating space and apply ideas about direction and distance; 	20, 145	36, 38, 74, 77, 79, 89, 92, 116
<ul style="list-style-type: none"> Find and name locations with simple relationships such as "near to" and in coordinate systems such as maps. 	20, 125, 145	36, 74, 77, 79, 89, 92, 116

Apply transformations and use symmetry to analyze mathematical situations

<ul style="list-style-type: none"> Recognize and apply slides, flips, and turns; 	140	86
<ul style="list-style-type: none"> Recognize and create shapes that have symmetry. 	153	*86, *101, 122, 126

Use visualization, spatial reasoning, and geometric modeling to solve problems

<ul style="list-style-type: none"> Create mental images of geometric shapes using spatial memory and spatial visualization; 	9, 65, 75, 150	3, 7, 22, 72, 86 Exercise 7
<ul style="list-style-type: none"> Recognize and represent shapes from different perspectives; 	9, 65, 75, 151	7, 38, 72, 86, 101 Exercise 7

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<ul style="list-style-type: none"> Relate ideas in geometry to ideas in number and measurement; 	26, 27, 50, 56, 62, 65, 83, 135, 138, 151, 152	
<ul style="list-style-type: none"> Recognize geometric shapes and structures in the environment and specify their location. 	26, 27, 62, *65, *75, 138, *150, 151, 152	Exercise 7
MEASUREMENT		
Understand measurable attributes of objects and the units		
<ul style="list-style-type: none"> Recognize the attributes of length, volume, weight, area, and time; 	26, 27, 50, 56, 62, 83, 87, 134, 138, 143, 152 Days 76, 95	13, 14, 21, 24, 29, 32, 39, 41, 43, 48, 52, 53, 63, 71, 91, 136, 138, 143 Exercise 5, 9 Temperature 42
<ul style="list-style-type: none"> Compare and order objects according to these attributes; 	26, 27, 50, 83, 87, 134, 143	13, 14, 16, 21, 29, 32, 39, 41, 43, 48, 52, 53, 63, 71, 91, 136, 143 Exercise 5 Temperature 42
<ul style="list-style-type: none"> Understand how to measure using nonstandard and standard units; 	26, 27, 50, 56, 62, 83, 87, 152	13, 14, 21, 24, 29, 32, 39, 41, 43, 48, 52, 53, 63, 71, 91, 136 Exercise 5 Temperature 42
<ul style="list-style-type: none"> Select an appropriate unit and tool for the attribute being measured. 	26, 27, 50, 56, 62, 83, 87	13, 14, 21, 24, 29, 32, 39, 41, 43, 48, 52, 53, 63, 71, 136 Exercise 5 Temperature 42

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Apply appropriate techniques, tools, and formulas to determine measurements		
<ul style="list-style-type: none"> Measure with multiple copies of units of the same size, such as paper clips laid end to end; 	50	21, 24, 29, 41, 43, 52, 91
<ul style="list-style-type: none"> Use repetition of a single unit to measure something larger than the unit, for instance, measuring the length of a room with a single meterstick; 	50	21, 24, 29, 41, 43, 52, 91
<ul style="list-style-type: none"> Use tools to measure; 	26, 27, 50, 56, 62	13, 14, 21, 24, 29, 43, 48, 52, 63, 71, 91, 136 Exercise 5 Temperature 42
<ul style="list-style-type: none"> Develop common referents for measures to make comparisons and estimates. 	50, 134, 143	13, 14, 21, 24, 29, 32, 39, 41, 43, 52, 53, 71, 91, 136, 138 Exercise 5 Temperature 42

DATA ANALYSIS AND PROBABILITY

Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them		
<ul style="list-style-type: none"> Pose questions and gather data about themselves and their surroundings; 	73, 105, 108, 120	13, 14, 16, 32, 41, 52, 53, 54, 66, 67, 72, 94, 96, 99, 102, 134, 136, 141, 142 Events 44, 76 Exercise 5, 12
<ul style="list-style-type: none"> Sort and classify objects according to their attributes and organize data about the objects; 	73, 105, 108, 120	13, 14, 16, 32, 41, 52, 53, 54, 66, 67, 72, 94, 96, 99, 102, 134, 136, 141, 142 Events 44, 76 Exercise 5, 12
<ul style="list-style-type: none"> Represent data using concrete objects, pictures, and graphs. 	73, 105, 108, 120	13, 14, 16, 32, 41, 52, 53, 54, 66, 67, 72, 94, 96, 99, 102, 134, 136, 141, 142 Events 44, 76 Exercise 5, 12

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Select and use appropriate statistical methods to analyze data		
<ul style="list-style-type: none"> Describe parts of the data and the set of data as a whole to determine what the data show. 	73, 105, 108, 115, 120, 134	13, 14, 16, 32, 41, 52, 53, 54, 66, 67, 72, 94, 96, 99, 102, 136, 141 Exercise 5, 12
Develop and evaluate inferences and predictions that are based on data		
<ul style="list-style-type: none"> Discuss events related to students' experiences as likely or unlikely. 	108	*54, 55, *66, *67, 94, 96, 134
Understand and apply basic concepts of probability - Problem Solving		
Build new mathematical knowledge through problem solving; Solve problems that arise in mathematics and in other contexts; Apply and adapt a variety of appropriate strategies to solve problems; Monitor and reflect on the process of mathematical problem solving.	73, 77, 85, 100, 101, 105, 108, 120	13, 14, 16, 32, 41, 44, 52, 53, 54, 62, 66, 67, 72, 94, 96, 99, 102, 134, 141, 146, 149, 151 Exercise 5, 8, 12
REASONING AND PROOF		
Recognize reasoning and proof as fundamental aspects of mathematics; Make and investigate mathematical conjectures; Develop and evaluate mathematical arguments and proofs; Select and use various types of reasoning and methods of proof.	73, 77, 85, 100, 101, 105, 108, 120	13, 14, 16, 32, 41, 44, 52, 53, 54, 62, 66, 67, 72, 94, 96, 99, 102, 134, 141, 146, 149, 151 Exercise 5, 8, 12

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COMMUNICATION		
<p>Organize and consolidate their mathematical thinking through communication;</p> <p>Communicate their mathematical thinking coherently and clearly to peers, teachers, and others;</p> <p>Analyze and evaluate the mathematical thinking and strategies of others;</p> <p>Use the language of mathematics to express mathematical ideas precisely.</p>	73, 77, 85, 100, 101, 105, 108, 120	<p>13, 14, 16, 41, 44, 52, 53, 54, 62, 66, 67, 72, 94, 96, 99, 102, 134, 141, 146, 149, 151</p> <p>Exercise 5, 8, 12</p>
CONNECTION		
<p>Recognize and use connections among mathematical ideas;</p> <p>Understand how mathematical ideas interconnect and build on one another to produce a coherent whole;</p> <p>Recognize and apply mathematics in contexts outside of mathematics.</p>	73, 77, 85, 100, 101, 105, 108, 120	<p>13, 14, 16, 41, 44, 52, 53, 54, 62, 66, 67, 72, 94, 96, 99, 102, 134, 141, 146, 149, 151</p> <p>Exercise 5, 8, 12</p>
REPRESENTATION		
<ul style="list-style-type: none"> • Create and use representations to organize, record, and communicate mathematical ideas; 	73, 77, 85, 100, 101, 108, 120	<p>13, 14, 16, 41, 44, 52, 53, 54, 66, 67, 72, 94, 99, 102, 134, 141</p> <p>Exercise 5, 8</p>
<ul style="list-style-type: none"> • Select, apply, and translate among mathematical representations to solve problems; 	73, 77, 85, 100, 101, 108, 120	<p>13, 14, 16, 41, 44, 52, 53, 54, 66, 67, 72, 94, 99, 102, 134, 141</p> <p>Exercise 5, 8</p>
<ul style="list-style-type: none"> • Use representations to model and interpret physical, social, and mathematical phenomena. 	73, 77, 85, 100, 101, 108, 120	<p>13, 14, 16, 41, 44, 52, 53, 54, 66, 67, 72, 94, 99, 102, 134, 141</p> <p>Exercise 5, 8, 12</p>