

Standards / Objectives	<i>Excel Math</i> Lesson Numbers	Exercises
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<b>STANDARD 1: NUMBER AND OPERATIONS</b>
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<p><b>M.S.K.1</b> Through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics, students will</p> <ul style="list-style-type: none"> <li>demonstrate understanding of numbers, ways of representing numbers, and relationships among numbers and number systems, demonstrate meanings of operations and how they relate to one another, and compute fluently and make reasonable estimates.</li> </ul>		
M.O.K.1.1 count forward to 20 and backward from 10 with and without manipulatives.	8, 10, 15, 16, 17, 20, 21, 25, 26, 28, 30, 31, 32, 33, 36, 37, 40, 42, 44, 45, 47, 49, 50, 52, 55, 56, 58, 60, 61, 62, 65, 68, 69, 71, 73, 80, 90, 91, 95, 96, 100, 101, 105, 110, 112, 116, 120, 122, 124, 125, 127, 130, 135, 138, 142, 143, 144, 145	3, 6, 7, 10, 11, 12, 14, 20, 22
M.O.K.1.2 read, write, order, and compare numbers to 20 using multiple strategies (e.g. manipulatives, number line).	8, 10, 15, 16, 20, 25, 28, 30, 40, 44, 45, 50, 58, 60, 61, 62, 65, 68, 69, 71, 73, 80, 89, 90, 91, 95, 98, 100, 101, 105, 108, 110, 112, 115, 116, 118, 120, 122, 124, 125, 127, 130, 135, 144, 148, 151, 152	1, 2, 3, 4, 5, 6, 7, 10, 11, 12, 14, 19, 22
M.O.K.1.3 group and count manipulatives by ones, fives, and tens.	8, 10, 15, 16, 20, 21, 25, 28, 30, 31, 32, 33, 40, 44, 45, 49, 50, 58, 60, 62, 65, 80, 89, 90, 95, 98, 100, 105, 108, 110, 115, 120, 122, 124, 125, 130, 135, 136, 138, 142, 143, 144, 145, 146, 147, 148	22
M.O.K.1.4 model and identify place value of each digit utilizing standard and expanded form through 20.	60, 65, 80, 90, 95, 100, 105, 110, 120, 125, 130, 135	22
M.O.K.1.5 Use ordinal numbers 1 <sup>st</sup> – 10 <sup>th</sup> to identify position in a sequence.	27, 59, 74, 75	10
M.O.K.1.6 estimate the number of objects in a group of 20 or less and count to evaluate reasonableness of estimation.	21, 26, 36, 37, 52, 55	
M.O.K.1.7 identify and name halves and wholes using concrete models.	92, 155	18
M.O.K.1.8 use concrete objects to model addition and subtraction of whole numbers related to sums of 10 or less and write corresponding number sentence.	42, 47, 49, 56, 62, 64, 70, 71, 81, 85, 86, 93, 96, 97, 99, 103, 106, 109, 113, 116, 121, 123, 131, 133, 136, 138, 142, 143, 145, 146, 147, 148, 149, 150, 151	
M.O.K.1.9 model meanings of operations and the relationship between addition and subtraction (e.g., identity element of addition, commutative property) using manipulatives.	42, 47, 49, 56, 62, 64, 70, 71, 81, 85, 86, 93, 96, 97, 99, 103, 106, 109, 113, 116, 121, 123, 131, 133, 136, 138, 142, 143, 145, 146, 147, 148, 149, 150, 151	
M.O.K.1.10 create grade-appropriate picture and story problems, solve using a variety of strategies, present solutions and justify results.	42, 62, 64, 70, 71, 81, 85, 86, 93, 97, 99, 103, 106, 113, 121, 131, 138, 142, 143, 147, 148, 151	

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## STANDARD 2: ALGEBRA

<p>M.S.K.2 Through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics, students will</p> <ul style="list-style-type: none"> <li>• demonstrate understanding of patterns, relations and functions,</li> <li>• represent and analyze mathematical situations and structures using algebraic symbols,</li> <li>• use mathematical models to represent and understand quantitative relationships, and</li> <li>• analyze change in various contexts.</li> </ul>		
M.O.K.2.1 justify the classification of self-selected objects based on attributes.	5, 14, 17, 22, 23, 46, 48, 51, 63, 66, 68, 76, 79	21
M.O.K.2.2 create, describe, and extend a repeating pattern using common objects, sound, and movement.	12, 13, 18, 38, 41, 72, 134	
M.O.K.2.3 model and identify patterns of counting by 5's and 10's.	69, 91, 101, 112, 125, 127, 130, 135	22

## STANDARD 3: GEOMETRY

<p>M.S.K.3 Through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics, students will</p> <ul style="list-style-type: none"> <li>• analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships,</li> <li>• specify locations and describe spatial relationships using coordinate geometry and other representational systems,</li> <li>• apply transformations and use symmetry to analyze mathematical situations, and</li> <li>• solve problems using visualization, spatial reasoning, and geometric modeling.</li> </ul>		
M.O.K.3.1 use physical materials to construct, identify, and classify basic geometric plane shapes: <ul style="list-style-type: none"> <li>• circles</li> <li>• ellipses (oval)</li> <li>• rectangles including squares</li> <li>• triangles</li> </ul>	17, 43, 48, 58, 61, 92, 128, 134, 141	8, 9, 15, 16, 17, 19
M.O.K.3.2 recognize and describe basic geometric shapes in the environment.	*43, *48, 92	8, 16, 17
M.O.K.3.3 model and describe spatial relationships: <ul style="list-style-type: none"> <li>• inside/outside</li> <li>• top/bottom</li> <li>• before/after</li> </ul>	1, 3, 4, 6, 7, 9, 29, 74, 87, 128, 139, 141	9, 10, 17, 19
M.O.K.3.4 identify the separate parts used to make a whole object.	155	18

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## STANDARD 4: MEASUREMENT

<p>M.S.K.4 Through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics, students will</p> <ul style="list-style-type: none"> <li>demonstrate understanding of measurable attributes of objects and the units, systems, and processes of measurement,</li> <li>apply appropriate techniques, tools and formulas to determine measurements.</li> </ul>		
M.O.K.4.1 estimate the size of an object and compare and order objects with respect to a given attribute.	5, 11, 14, 19, 24, 34, 94, 126, 129	5, 13, 21, 23, 24
M.O.K.4.2 use standard and nonstandard units of measure to find the length of an object.	11, 34, 39, 114, 119	13, 21
M.O.K.4.3 compare two objects in nonstandard units of measure, according to one or more of the following attributes: <ul style="list-style-type: none"> <li>length, height, weight</li> </ul>	11, 19, 24, 34, 39, 84, 94, 114, 119, 126 Volume 54 Time 57 Temperature 129	13, 21, 24 Temperature 23
M.O.K.4.4 use calendar to identify date and the sequence of days of the week.	2, 53, 73, 82, 87, 88	
M.O.K.4.5 read time to the hour using analog and digital clocks.	73, 78, 82, 83	
M.O.K.4.6 identify the name and value of coins and explain the relationships between: <ul style="list-style-type: none"> <li>penny, nickel, dime</li> </ul>	67, 77, 102, 107, 116, 132, 137, 154	

## STANDARD 5: DATA ANALYSIS AND PROBABILITY

<p>M.S.K.5 Through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics, students will</p> <ul style="list-style-type: none"> <li>formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them,</li> <li>select and use appropriate statistical methods to analyze data,</li> <li>develop and evaluate inferences and predictions that are based on models, and</li> <li>apply and demonstrate an understanding of basic concepts of probability.</li> </ul>		
M.O.K.5.1 collect, organize, display, and interpret data using a pictograph and bar graph (with and without technology)	34, 35, 54, 94, 104, 111, 114, 119, 140, 153, 154, 155	18
M.O.K.5.2 conduct a simple probability experiment and use tallies to record results in a table, make predictions based on results.	34, 35, 54, 94, 104, 111, 114, 119, 140, 153, 154, 155	18