

Texas Essential Knowledge and Skills	Excel Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
<b>NUMBER, OPERATION, QUANTITATIVE REASONING</b>		
<b>(2.1) Number, operation, and quantitative reasoning. The student understands how place value is used to represent whole numbers.</b>		
(A) Use concrete models of hundreds, tens, and ones to represent a given whole number (up to 999) in various ways;	1, 6, 9, 13, 14, 16, 22, 23, 24, 28, 31, 32, 36, 37, 39, 42, 46, 49, 51, 54, 56, 59, 64, 67, 68, 71, 72, 73, 74, 82, 88, 91, 94, 99, 106, 107, 116, 118, 122, 123, 129, 139, 145	
(B) Use place value to read, write, and describe the value of whole numbers to 999; and	6, 11, 14, 16, 17, 22, 23, 24, 26, 28, 31, 32, 33, 37, 38, 39, 41, 46, 49, 51, 54, 59, 64, 71, 72, 73, 74, 76, 82, 88, 91, 92, 94, 99, 106, 107, 116, 118, 122, 123, 129, 133, 139, 145, 148	
(C) Use place value to compare and order whole numbers to 999 and record the comparisons using numbers and symbols (<, =, >).	3, 6, 7, *10, 11, 12, 14, 18, 47, 61, 99, 111, 112, 124, 142	25, 32, 39, 90, 91, 113, 115, 128, 136, 149, 150, 153
<b>(2.2) Number, operation, and quantitative reasoning. The student describes how fractions are used to name parts of whole objects or sets of objects.</b>		
(A) Use concrete models to represent and name fractional parts of a whole object (with denominators of 12 or less);	63, *77, 80, *113, *114, *115, 120, 126, 150, 155	Activity 2
(B) Use concrete models to represent and name fractional parts of a set of objects (with denominators of 12 or less); and	63, *77, 80, *153	
(C) Use concrete models to determine if a fractional part of a whole is closer to 0, $\frac{1}{2}$ , or 1.	*63, *80, *120, *150, *155 Add / Subtract: 150	Activity *2

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<b>(2.3) Number, operation, and quantitative reasoning. The student adds and subtracts whole numbers to solve problems.</b>		
(A) Recall and apply basic addition and subtraction facts ( to 18);	1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 23, 24, 26, 28, 31, 32, 34, 36, 38, 41, 42, 43, 44, 46, 48, 49, 51, 52, 53, 54, 56, 58, 59, 61, 62, 64, 66, 67, 68, 69, 70, 76, 77, 79, 81, 82, 83, 84, 87, 90, 92, 97, 98, 99, 101, 102, 103, 106, 107, 108, 109, 111, 112, 116, 119, 126, 131, 133, 137, 138, 140, 142, 146, 147, 148, 151, 152 <b>Basic Multiplication Facts:</b> 124, 131, 132, 134, 137, 138, 139, 140, 142, 144, 146, 147, 148, 149, 151, 152, 154	21, 22, 26, 31, 38, 42, 46, 47, 51, 52, 56, 57, 60, 61, 65, 68, 70, 75, 80, 82, 87, 95, 96, 101, 117, 118, 121, 124, 125, 126, 130, 132, 134, 140, 142
(B) Model addition and subtraction of two-digit numbers with objects, pictures, words, and numbers;	11, 13, 16, 22, 23, 24, 31, 32, 34, 36, 39, 42, 46, 49, 51, 56, 59, 66, 67, 68, 71, 72, 73, 76, 82, 88, 94, 107, 116, 118, 122 <b>One-digit:</b> 4, 6, 9, 38, 48, 52, 58, 97, 147 <b>Three-digit:</b> 92, 106, 122, 129, 133, 139, 145 <b>Decimals:</b> 79, 86, 138, 140	40, 49, 90, 95, 97, 101, 104, 109, 114, 123, 125, 128, 130, 134, 136, 137, 143, 147  One-digit: 21, 22, 26, 30, 31, 33, 35, 37, 38, 41, 45, 46, 51, 56, 60, 61, 65, 68, 70, 75, 80, 82, 87, 96, 117, 121, 124
(C) Select addition or subtraction to solve problems using two-digit numbers, whether or not regrouping is necessary;	6, 11, 25, 57, 66, 81, 104, 109, 117	43, 49, 63, 67, 76, 79, 83, 93, 108, 115, 131, 133, 146, 150, 153, 155
(D) Determine the value of a collection of coins up to one dollar; and	43, 66, 79, 83, 109, 119, 138, 140, 149	72, 117, 123, 126, 132, 140, 146
(E) Describe how the cent symbol, dollar symbol, and the decimal point are used to name the value of a collection of coins.	*43, 66, 79, 86, 109, 119, 138, 140, 149	108, 117, 123, 126, 132, 140, 146
<b>(2.4) Number, operation, and quantitative reasoning. The student models multiplication and division.</b>		
(A) Model, create, and describe multiplication situations in which equivalent sets of concrete objects are joined; and	95, 108, 121, 125, *131, 141, *152	58, 72, 95, 101, 109, 114, 119, 125, 130, 134, 137, 143, 147, 151, 155
(B) Model, create, and describe division situations in which a set of concrete objects is separated into equivalent sets.	77, 111, 113, 114, 115, 127, 128, 136, *152, 153, 154	

Texas Essential Knowledge and Skills	Excel Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
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<b>PATTERNS, RELATIONSHIPS, ALGEBRAIC THINKING</b>		
<b>(2.5) Patterns, relationships, and algebraic thinking. The student uses patterns in numbers and operations.</b>		
(A) Find patterns in numbers such as in a 100s chart;	2, 5, 14, 15, 34, 37, 54, 70, 82, 108, 121, 136, 141	42, 47, 97, 124, 151
(B) Use patterns in place value to compare and order whole numbers through 999; and	2, 14, 18, 26, 34, 37, 47, 54, 61, 70, 73, 87, 93, 121	
(C) Use patterns and relationships to develop strategies to remember basic addition and subtraction facts. Determine patterns in related addition and subtraction number sentences (including fact families) such as $8 + 9 = 17$ , $9 + 8 = 17$ , $17 - 8 = 9$ , and $17 - 9 = 8$ .	5, 13, 20, 21, 28, 36, 42, 47, 48, 56, 67, 108, 121, 131, 141  Multiply / Divide: 137, 152	42, 47, 97, 124, 151
<b>(2.6) Patterns, relationships, and algebraic thinking. The student uses patterns to describe relationships and make predictions.</b>		
(A) Generate a list of paired numbers based on a real-life situation such as number of tricycles related to number of wheels;		49, 99, 110, 121, 154
(B) Identify patterns in a list of related number pairs based on a real-life situation and extend the list; and	*95, *105, *124	49, *71, 86, 121
(C) Identify, describe, and extend repeating and additive patterns to make predictions and solve problems.	47, 70, 87, 93, 95, 96, 101  Equations: 102, 103, 115, 117	*42, *47, 71, 86, *124, *151, 152  Equations w/ unknowns: 21, 41, 45, 52, 57, 61, 65, 70, 75, 80, 87, 95, 96, 101, 109, 114, 119, 125, 130, 134, 137, 143, 147, 155

Texas Essential Knowledge and Skills	<i>Excel Math</i> Lesson Numbers	Stretch Lesson Numbers Activity Numbers
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## GEOMETRY AND SPATIAL REASONING

**(2.7) Geometry and spatial reasoning. The student uses attributes to identify two- and three-dimensional geometric figures. The student compares and contrasts two- and three-dimensional geometric figures or both.**

(A) Describe attributes (the number of vertices, faces, edges, sides) of two- and three-dimensional geometric figures such as circles, polygons, spheres, cones, cylinders, prisms, and pyramids, etc.;	*7, 8, 10, 78, 101, 110, 132, 144	21, 23, 24, 27, 34, 36, 62, 66, 74, 77, 85, 92, 94, 96, 103, 105, 112, 127, 129, 138, 139, 144  Activity 7, 12, 13
(B) Use attributes to describe how 2 two-dimensional figures or 2 three-dimensional geometric figures are alike or different; and	8, *10, 78, 110, 132, 144	23, 24, 34, 36, 62, 66, 112, 129  Activity 7, 12, 13
(C) Cut two-dimensional geometric figures apart and identify the new geometric figures formed.	Symmetry: 75  Flips, Slides, Turns: 135	66, 77, 112, 127, 139  Activity 7, 11, 13

**(2.8) Geometry and spatial reasoning. The student recognizes that a line can be used to represent a set of numbers and its properties.**

The student is expected to use whole numbers to locate and name points on a number line.	4, 6, 9, 22, 26, 37, 39, 47, 48, 56, 70	
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## MEASUREMENT

**(2.9) Measurement. The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length, area, capacity, and weight/mass. The student recognizes and uses models that approximate standard units (from both SI, also known as metric, and customary systems) of length, weight/mass, capacity, and time.**

(A) Identify concrete models that approximate standard units of length and use them to measure length;	53, 84, 85	*148  Measurement Activity: 1, 2, 3, 4, 5, 6
(B) Select a non-standard unit of measure such as square tiles to determine the area of a two-dimensional surface;	90  Perimeter: 132	Activity *2, *11, *13
(C) Select a non-standard unit of measure such as a bathroom cup or a jar to determine the capacity of a given container; and	*53  Volume: 65	53  Measurement Activity: 1, 2, 3, 4, 5, 6, 7, 8 (Volume)

Texas Essential Knowledge and Skills	Excel Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
(D) Select a non-standard unit of measure such as beans or marbles to determine the weight/mass of a given object.	*53, 60	100, 118, 131 Measurement Activity: 1, 2, 3, 4, 5, 6, 7, 8 (Volume) Measurement Activity 1, 2, 3, 4, 5, 6, 7 (Weight) Activity 9
<b>(2.10) Measurement. The student uses standard tools to estimate and measure time and temperature (in degrees Fahrenheit).</b>		
(A) Read a thermometer to gather data;	53	
(B) Read and write times shown on analog and digital clocks using five-minute increments; and	19, 29, 45, 62, 69, 89, 98, 143	
(C) Describe activities that take approximately one second, one minute, and one hour.	*40 Days / Months: 44, 134, 151	28, *78, *89 Calendar: 40, 49, 104, 133
<b>PROBABILITY AND STATISTICS</b>		
<b>(2.11) Probability and statistics. The student organizes data to make it useful for interpreting information.</b>		
(A) Construct picture graphs and bar-type graphs;	15, 25, 35, 50, 100 Tally: 5 Venn Diagrams: 10	Activity 1, *14
(B) Draw conclusions and answer questions based on picture graphs and bar-type graphs; and	5, 10, 15, 25, 35, 50, 100, 105	Activity 1, *14
(C) Use data to describe events as more likely or less likely such as drawing a certain color crayon from a bag of seven red crayons and three green crayons.	25, 100 Possibilities: 35	Possibilities: 50, 81 Activity *1, *14

Texas Essential Knowledge and Skills	<i>Excel Math</i> Lesson Numbers	Stretch Lesson Numbers Activity Numbers
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<b>UNDERLYING PROCESSES MATHEMATICAL TOOLS</b>		
<b>(2.12) Underlying processes and mathematical tools. The student applies Grade 2 mathematics to solve problems connected to everyday experiences and activities in and outside of school.</b>		
(A) Identify the mathematics in everyday situations;	5, 15, 25, 27, 30, 33, 35, 40, 50, 53, 57, 66, 77, 81, 95, 100, 104, 105, 109, 111, 113, 114, 117, 125, 127, 128, 130, 134, 153, 154	29, 30, 35, 37, 40, 43, 44, 48, 49, 50, 53, 54, 55, 58, 59, 63, 64, 67, 69, 71, 72, 73, 76, 78, 79, 81, 83, 84, 86, 88, 89, 93, 98, 99, 100, 102, 104, 106, 107, 108, 111, 116, 117, 120, 121, 122, 123, 126, 132, 133, 135, 140, 141, 145, 146, 148  Activity 3, 4, 5, 6, 8, 10, 14
(B) Solve problems with guidance that incorporates the processes of understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;	5, 10, 15, 25, 27, 30, 33, 35, 40, 50, 57, 66, 77, 81, 95, 100, 104, 105, 109, 111, 113, 114, 117, 125, 127, 128, 130, 134, 153, 154	27, 29, 30, 35, 37, 40, 43, 44, 48, 49, 50, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 63, 64, 65, 67, 68, 69, 70, 71, 72, 73, 75, 76, 78, 79, 80, 81, 82, 83, 84, 86, 87, 88, 89, 93, 95, 98, 99, 100, 101, 102, 104, 106, 107, 108, 109, 111, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 125, 126, 128, 130, 131, 132, 133, 134, 135, 136, 137, 140, 141, 142, 143, 145, 146, 147, 148, 150, 153, 155  Activity 3, 4, 5, 6, 14
(C) Select or develop an appropriate problem-solving plan or strategy including drawing a picture, looking for a pattern, systematic guessing and checking, or acting it out in order to solve a problem; and	5, 10, 15, 25, 27, 30, 33, 35, 40, 50, 57, 66, 77, 81, 95, 100, 104, 105, 109, 111, 113, 114, 117, 125, 127, 128, 130, 134, 153, 154	27, 29, 30, 35, 37, 40, 43, 44, 48, 49, 50, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 63, 64, 65, 67, 68, 69, 70, 71, 72, 73, 75, 76, 78, 79, 80, 81, 82, 83, 84, 86, 87, 88, 89, 93, 95, 98, 99, 100, 101, 102, 104, 106, 107, 108, 109, 111, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 125, 126, 128, 130, 131, 132, 133, 134, 135, 136, 137, 140, 141, 142, 143, 145, 146, 147, 148, 150, 153, 155  Activity 3, 4, 5, 6, 14
(D) Use tools such as real objects, manipulatives, and technology to solve problems.	5, 10, 15, 25, 27, 36, 40, 50, 66, 77, 81, 100, 104, 105, 109, 111, 113, 114, 125, 127, 128, 130, 134, 153, 154	27, 29, 30, 35, 37, 40, 48, 49, 50, 53, 55, 56, 59, 60, 68, 71, 73, 76, 100, 104, 117, 118, 121, 123, 126, 131, 133, 140, 142, 146, 148  Activity: 3, 4, 5, 6, 10, 14



## Texas 2<sup>nd</sup> Grade TEKS / *Excel Math* Correlation

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<b>(2.13) Underlying processes and mathematical tools. The student communicates about Grade 2 mathematics using informal language.</b>		
(A) Explain and record observations using objects, words, pictures, numbers, and technology; and	5, 10, 15, 25, 30, 33, 35, 40, 50, 81, 100, 104, 105, 109, 111, 113, 114, 125, 127, 128, 130, 134, 153	27, 29, 30, 37, 40, 42, 44, 47, 48, 49, 50, 53, 54, 55, 59, 64, 69, 73, 81, 84, 97, 100, 104, 106, 107, 111, 116, 118, 122, 124, 131, 135, 141, 151  Activity 3, 4, 5, 8, 10, 14
(B) Relate informal language to mathematical language and symbols.	5, 10, 15, 25, 30, 33, 35, 40, 50, 81, 100, 104, 105, 109, 111, 113, 114, 125, 127, 128, 130, 134, 153	27, 29, 30, 37, 40, 42, 44, 47, 48, 49, 50, 53, 54, 55, 59, 64, 69, 73, 81, 84, 97, 100, 104, 106, 107, 111, 116, 118, 122, 124, 131, 135, 141, 151  Activity 3, 4, 5, 8, 10, 14
<b>(2.14) Underlying processes and mathematical tools. The student uses logical reasoning.</b>		
The student is expected to justify his or her thinking using objects, words, pictures, numbers, and technology.	5, 10, 15, 25, 27, 30, 33, 35, 36, 40, 50, 66, 77, 81, 100, 104, 105, 109, 111, 113, 114, 125, 127, 128, 130, 134, 153, 154	27, 29, 30, 37, 40, 42, 44, 47, 48, 49, 50, 53, 54, 55, 59, 64, 69, 73, 81, 84, 97, 100, 104, 106, 107, 111, 116, 118, 122, 124, 131, 135, 141, 151  Activity 3, 4, 5, 8, 10, 14