

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
<p><b>Standard 1</b></p> <p><b>Students will understand the base-ten numeration system, place value concepts, simple fractions and perform operations with whole numbers.</b></p>		
<p><b>Objective 1: Represent whole numbers up to 10,000, comprehend place value concepts, and identify relationships among whole numbers using base-ten models and symbolic notation.</b></p>		
<p>a. Read, write, and represent whole numbers using standard and expanded form.</p>	<p>1, 7, 9, 12, 14, 19, 23, 27, 34, 43, 47, 49, 64, 67, 79, 91, 100, 101, 102, 103, 132, 133, 150</p> <p>Ordinals: 3</p> <p>Odd / Even: 31, 46, 63</p> <p>Decimals: 33, 51</p>	<p>85, 125</p> <p>Odd/ Even: 35, 48, 57, 91</p>
<p>b. Demonstrate multiple ways to represent numbers using models and symbolic representations (e.g., fifty is the same as two groups of 25, the number of pennies in five dimes, or 75 - 25).</p>	<p>1, 7, 12, 14, 19, 23, 33, 34, 43, 44, 47, 49, 51, 57, 64, 67, 91, 100, 101, 102, 103, 118, 132, 133, 146, 150</p>	<p>92</p>
<p>c. Identify the place and the value of a given digit in a four-digit numeral and round numbers to the nearest ten, hundred, and thousand.</p>	<p>Up to three digits: 1, 7, 12, 14, 19, 23, 33, 34, 41, 42, 51, 52, 60, 67, 75, 101, 102, 103, 132, 133, 134</p> <p>Four digits: 43, 47, 49, 64, 90, 91, 95, 100, 104, 115, 136, 150</p>	
<p>d. Order and compare whole numbers on a number line and use the symbols <math>&lt;</math>, <math>&gt;</math>, <math>\neq</math>, and <math>=</math> when comparing whole numbers.</p>	<p>4, 13, 21, 38, 57, 60, 98, 99, 104, 122, 134</p> <p>Events: 70</p>	<p>30, 35, 65, 102, 117, 123, 128</p> <p>Order: 2, 6, 8, 14, 16, 21, 27, 28, 32, 36, 42, 47, 59, 61, 66, 74, 88, 93, 99, 108, 116, 138, 146</p>
<p>e. Identify factors and multiples of whole numbers.</p>	<p>39, 46, 53, 96, 117, 143, 144</p> <p>Addition / Subtraction Facts: 13, 17, 24, 39, 45</p> <p>Division / Multiplication Facts: 46, 53, 71, 96, 142</p>	

\*Gives opportunity to teach specific State Standard



## Utah 3<sup>rd</sup> Grade Standards / *Excel Math* Correlation

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<b>Objective 2: Use fractions to describe and compare parts of the whole.</b>		
a. Identify the denominator of a fraction as the number of equal parts of the unit whole and the numerator of a fraction as the number of equal parts being considered.	54, 66, 82, 109, 137, 140, 148	Activity 3, 8 (percent)
b. Define regions and sets of objects as a whole and divide the whole into equal parts using a variety of objects, models, and illustrations.	31, 54, 66, *82, 87, 88, 93, 94, 109, *137, 140, 147, 148	Activity 3, 8
c. Name and write a fraction to represent a portion of a unit whole for halves, thirds, fourths, sixths, and eighths.	*31, 54, 66, 82, 109, 137, 147 Add / Subtract: 140	Activity 3, 8
d. Place fractions on the number line and compare and order fractions using models, pictures, the number line, and symbols.	*54, *66, *82, *147, *148	Activity *8
e. Find equivalent fractions using concrete and pictorial representations.	147, 148, 149	Activity 8
<b>Objective 3: Model problems involving addition, subtraction, multiplication, and division.</b>		
a. Demonstrate the meaning of multiplication and division of whole numbers through the use of a variety of representations (e.g., equal-sized groups, arrays, area models, and equal jumps on a number line for multiplication, partitioning and sharing for division).	39, 46, 58, 59, 61, 68, 71, 73, 87, 88, 91, 93, 94, 95 (decimals), 96, 97, 101, 102, 103, 111, 117, 118, 131, 132, 133, 134, 142, 151, 153, 154	100
b. Use a variety of strategies and tools, such as repeated addition or subtraction, equal jumps on the number line, and counters arranged in arrays to model multiplication and division problems.	39, 46, 58, 59, 61, 68, 71, 73, 87, 88, 91, 93, 94, 95 (decimals), 96, 97, 101, 102, 103, 111, 117, 118, 131, 132, 133, 134, 142, 151, 153, 154	100
c. Demonstrate, using objects, that multiplication and division by the same number are inverse operations (e.g., $3 \times \square = 12$ is the same as $12 \div 3 = \square$ and $\square = 4$ ).	71, 96, 103, *111, 117, 118, 132, 133, 134, 142, 151, 154	
d. Demonstrate the effect of place value when multiplying whole numbers by 10.	53, *61	

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e. Write a story problem that relates to a given addition, subtraction, or multiplication equation, and write a number sentence to solve a problem related to the students' environment.	9, 11, 15, 32, 40, *51, 75, 83, 84, 85, 87, 88, 93, 96, 105, 110, 111, 114, 115, 126, 127, 137, 151  Deductive Reasoning: 25, 123	3, 5, 7, 10, 12, 18, 22, 23, 25, 26, 33, 34, 35, 37, 38, 43, 48, 52, 54, 55, 62, 64, 69, 71, 96, 97, 100, 102, 103, 105, 106, 109, 112, 130, 137, 143, 152  Activity: 5, 9  Deductive Reasoning: 20, 29, 51, 67, 80, 81, 84, 91, 92, 98, 113, 118, 120, 121, 122, 127, 131, 133, 135, 139, 140, 148, 153, Activity: 1, 6, 11
<b>Objective 4: Compute and solve problems involving addition and subtraction of 3- and 4-digit numbers and basic facts of multiplication and division.</b>		
a. Use a variety of methods to facilitate computation (e.g., estimation, mental math strategies, paper and pencil).	1, 7, 9, 16, 17, 33, 34, 39, 41, 42, 46, 47, 51, 58, 59, 61, 64, 71, 73, 87, 88, 96, 117, 118, 126, 127, 151	
b. Find the sum or difference of numbers, including monetary amounts, using models and strategies such as expanded form, compensation, partial sums, and the standard algorithm.	1, 2, 3, 6, 7, 8, 9, 11, 12, 13, 14, 16, 17, 19, 22, 23, 24, 26, 27, 28, 29, 31, 32, 33, 34, 36, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 51, 52, 57, 58, 61, 64, 67, 69, 74, 75, 79, 81, 84, 85, 92, 96, 105, 136  Money: 16, 22, 33, 51, 75, 114, 137, 139, 146	1, 2, 6, 9, 11, 13, 16, 19, 21, 23, 24, 28, 31, 33, 35, 36, 39, 40, 45, 48, 49, 54, 56, 57, 63, 65, 68, 79, 83, 89, 91, 97, 123, 128, 138, 144, 146  Money: 55, 71, 152
c. Compute basic multiplication facts (0-10) and related division facts using a variety of strategies based on properties of addition and multiplication (i.e., commutative, associative, identity, zero, and the distributive properties).	42, 44, 47, 48, 49, 51, 52, 56, 57, 58, 59, 64, 67, 68, 69, 71, 72, 73, 74, 76, 79, 81, 83, 84, 86, 89, 92, 94, 96, 97, 99, 103, 107, 113, 117, 118, 119, 124, 126, 127, 131, 136, 142, 143, 151, 154	70, 73, 75, 94, 100

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<b>Standard 2</b> <b>Students will use patterns, symbols, operations, and properties of addition and multiplication to represent and describe simple number relationships.</b>		
<b>Objective 1 Create, represent, and analyze growing patterns.</b>		
a. Create and extend growing patterns using objects, numbers, and tables.	2, 6, 31, 37, 46, 48, 77, 80, 97, 113, 126, 130, 155	45, 78  Coordinate Points: Activity 4
b. Describe how patterns are extended using manipulatives, pictures, and numerical representations.	2, 6, 31, 37, 46, 48, 77, 80, 97, 113, 126, 130, 155	45, 78
<b>Objective 2 Recognize, represent, and simplify simple number relationships using symbols, operations, and properties.</b>		
a. Represent numerical relationships as expressions, equations, and inequalities.	28, 36, 76, 81, 92, 107, 122	1, 11, 19, 24, 31, 33, 39, 40, 44, 49, 56, 63, 68, 70, 73, 75, 77, 83, 89, 94, 95, 101, 102, 107, 110, 114, 119, 124, 129, 134, 141, 149, 154
b. Solve equations involving equivalent expressions (e.g., $6 + 4 = \Delta + 7$ ).	28, 36, 76, 81, 92, 107, 122	1, 11, 19, 24, 31, 33, 39, 40, 44, 49, 56, 63, 68, 70, 73, 75, 77, 83, 89, 94, 95, 101, 102, 107, 110, 114, 119, 124, 129, 134, 141, 149, 154
c. Use the $>$ , $<$ , and $=$ symbols to compare two expressions involving addition and subtraction (e.g., $4 + 6 \square 3 + 2$ ; $3 + 5 \square 16 - 9$ ).	28, 36, 76, 81, 92, 107, 122	95, 128
d. Recognize and use the commutative, associative, distributive, and identity properties of addition and multiplication, and the zero property of multiplication.	6, 13, 17, 24, 71, 76, *81, 92	95

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<p><b>Standard 3</b></p> <p><b>Students will describe and analyze attributes of two-dimensional shapes.</b></p>
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<p><b>Objective 1: Describe and compare attributes of two-dimensional shapes.</b></p>
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<p>a. Identify, describe, and classify polygons (e.g., pentagons, hexagons, octagons).</p>	<p>8, 41, 54, 77, 86, 106, 116, 119, 120, 124, 129</p> <p>Three-dimensional: 69, 135, 141, 145</p>	<p>1, 4, 17, 41, 46, 50, 58, 60, 72, 76, 77, 78, 86, 87, 90, 104, 111, 115, 126, 132, 136, 147, 151</p> <p>Activity 2</p> <p>Three-dimensional: 145, 150 Activity 12</p>
<p>b. Identify attributes for classifying triangles (e.g., two equal sides for the isosceles triangle, three equal sides for the equilateral triangle, right angle for the right triangle).</p>	<p>8, 139</p> <p>Circle: 119</p>	<p>41, 50, 72, 76, 126</p>
<p>c. Identify attributes for classifying quadrilaterals (e.g., parallel sides for the parallelogram, right angles for the rectangle, equal sides and right angles for the square).</p>	<p>*86, 106, 116, 128, 129</p>	<p>*58, *60, 86, 87, 104, 111, 151</p>
<p>d. Identify right angles in geometric figures, or in appropriate objects, and determine whether other angles are greater or less than a right angle.</p>	<p>138, 139</p>	<p>Activity *2</p>

<p><b>Objective 2: Demonstrate the meaning of congruence through applying transformations.</b></p>
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<p>a. Demonstrate the effect of reflection, translation, or rotation using objects.</p>	<p>55 (Symmetry), 120</p>	<p>*46, *72</p>
<p>b. Determine whether two polygons are congruent by reflecting, translating, or rotating one polygon to physically fit on top of the other.</p>	<p>55 (Symmetry), 120</p>	<p>*46, *72</p>

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<b>Standard 4</b>		
<b>Students will select and use appropriate units and measurement tools to solve problems.</b>		
<b>Objective 1: Select and use appropriate tools and units to estimate and measure length, weight, capacity, time, and perimeter of two-dimensional figures.</b>		
a. Describe the part-whole relationships (e.g., 3 feet in a yard, a foot is 1/3 of a yard) between metric units of length (i.e., centimeter, meter), and among customary units of length (i.e., inch, foot, yard), capacity (i.e., cup, quart), and weight (i.e., pound, ounce).	50, 56, 62, 63, 74, 83, 108, 114, 121, 125 Directions: 10	29, 109, 140, 142 Activity 10 (temperature)
b. Measure the length of objects to the nearest centimeter, meter, half- and quarter-inch, foot, and yard.	56, 62, 108, 121, 129 Range: 85	145, 150
c. Measure capacity using cups and quarts, and measure weight using pounds and ounces.	62, 121 Volume: 63, 135, 145	109, 117, 140, 142 Activity 7 (Volume)
d. Identify the number of minutes in an hour, the number of hours in a day, the number of days in a year, and the number of weeks in a year.	18, 65, 78, 84, 89	12, 22, 38, 54
e. Describe perimeter as a measurable attribute of two-dimensional figures, and estimate and measure perimeter with metric and customary units.	86, 116 Area: 72, 124	Activity 3, 7 (Area)
<b>Objective 2: Solve problems involving measurements.</b>		
a. Determine simple equivalences of measurements (e.g., 30 inches = 2 feet and 6 inches; 6 cups = 1½ quarts; 90 min. = 1 hr. 30 min.).	56, 62, 74, 83, 121	
b. Compare given objects according to measurable attributes (i.e., length, weight, capacity).	32, 50, 56, 62, 83, 121, 125	29
c. Solve problems involving perimeter.	86, 116 Area: 72	
d. Determine elapsed time in hours (e.g., 7:00 a.m. to 2:00 p.m.).	26, 84, 89, <b>112, 152</b>	64 Order of time / events: 14, 32

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<p><b>Standard 5</b></p> <p><b>Students will collect and organize data to make predictions and identify basic concepts of probability.</b></p>
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<p><b>Objective 1: Collect, organize, and display data to make predictions.</b></p>		
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<p>a. Collect, read, represent, and interpret data using tables, graphs, and charts, including keys (e.g., pictographs, bar graphs, frequency tables, line plots).</p>	<p>20, 35, 80, 141 Ratios: 126, 127</p>	<p>23, 97, 143 Activity 10</p>
<p>b. Make predictions based on a data display.</p>	<p>20, 35, 80, 141 Ratios: 126, 127</p>	<p>23, 97, 143 Activity 10</p>

<p><b>Objective 2: Identify basic concepts of probability.</b></p>		
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<p>a. Describe the results of events using the terms “certain,” “likely,” “unlikely,” and “impossible.”</p>	<p>5, *20</p>	
<p>b. Conduct simple probability experiments, record possible outcomes systematically, and display results in an organized way (e.g., chart, graph).</p>	<p>5, 20 Combinations: 30</p>	
<p>c. Use results of simple probability experiments to describe the likelihood of a specific outcome in the future.</p>	<p>5, 20</p>	