



Standards / Objectives	Excel Math Lesson Numbers	Stretch Lessons Activity Numbers
------------------------	---------------------------	----------------------------------

Strand 1: Number and Operations

Concept 1: Number Sense

PO1. Express whole numbers, fractions, decimals, and percents using and connecting multiple representations.	1, 3, 6, 7, 8, 9, 11, 15, 16, 17, 21, 22, 27, 28, 42, 43, 45, 46, 50, 52, 53, 55, 61, 74, 85, 102, 126, 127, 128, 131, 133, 136, 137, 145	63, 68, 90, 92, 102, 105, 106, 113, 121, 122, 153 Activity 14
PO2. Compose and decompose whole numbers using factors and multiples	12, 13, 21, 24, 49, 51, 91, 93, 94, 106, 151 Prime Numbers 135	115, 117
PO3. Express fractions as fair sharing, parts of a whole, parts of a set, and locations on a real number line.	15, 16, 17, 18, 54, 67, 75, 79, 88, 95, 99, 110, 112, 114, 118, 145	13
PO4. Compare and order decimals to hundredths.	85, 100, 104, 115, 118, 145, 148 Whole Numbers 74 Fractions 125 Percents 143	
PO5. Use simple ratios to describe problems in context.	56	

Concept 2: Numerical Operations

PO1. Add and subtract decimals through hundredths including money to \$1000.00 and fractions with like denominators.	11, 12, 26, 67, 76, 81, 86, 104 Multiply / Divide 61, 83, 99, 107, 109, 110, 115, 116, 141, 142, 153, 154	30, 83, 101, 103, 111, 146
PO2. Use multiple strategies to multiply whole numbers <ul style="list-style-type: none"> • two-digit by two-digit • multi-digit by one-digit. 	12, 24, 31, 32, 36, 47, 49, 59, 62, 73, 84, 87, , 89116, 146, 151	16, 96, 142
PO3. Demonstrate fluency of multiplication and division facts through 12.	12, 13, 14, 17, 18, 19, 21, 22, 23, 24, 26, 28, 31, 34, 36, 46, 47, 48, 49, 51, 52, 53, 54, 56, 59, 61, 62, 64, 66, 71, 73, 74, 76, 77, 78, 79, 81, 84, 87, 89, 91, 92, 93, 94, 97, 98, 101, 102, 103, 112, 114, 116, 117, 122, 124, 129, 131, 132, 136, 137, 138, 141, 142, 149, 151, 153, 154 Add / Subtract 1, 2, 3, 6, 7, 8, 11, 13, 14, 35, 45	16, 75, 142 Add / Subtract 7, 8, 11, 17, 21, 25, 26, 28, 90, 105, 113, 122, 130, 132, 136, 138



Arizona 4th Grade Standards / *Excel* Math Correlation

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lessons Activity Numbers
PO4. Use multiple strategies to divide whole numbers.	17, 21, 24, 27, 28, 31, 33, 42, 43, 52, 53, 54, 59, 70, 73, 82, 83, 87, 89, 107, 138, 151	
PO5. Apply associative and distributive properties to solve multiplication and division problems.	108 Inverse 24, 27, 28, 36, 42, 43, 52, 53, 59, 82, 87, 89, 138	
PO6. Apply order of operations with whole numbers.	12, 14, 32, 34, 36, 42, 47, 52, 53, 62, 72	31, 129
Concept 3: Estimation		
PO1. Use benchmarks as meaningful points of comparison for whole numbers, decimals, and fractions.	8, 45, 55, 69, 104, *129	7, 8, 11, 13, 17, 126, 153
PO2. Make estimates appropriate to a given situation or computation with whole numbers and fractions.	45, 55, 69, 129	Whole numbers 6, 7, 11, 13, 17, 21, 26, 126
Strand 2: Data Analysis, Probability, and Discrete Mathematics		
Concept 1: Data Analysis (Statistics)		
PO1. Collect, record, organize, and display data using double bar graphs, single line graphs, or circle graphs.	5, 20, 25, 39, 40, 80, 119	10, 18, 43, 86, 97, 112, 145, 151 Activity 1, 2, 3, 4, 5,
PO2. Formulate and answer questions by interpreting and analyzing displays of data, including double bar graphs, single line graphs, or circle graphs.	5, 20, 25, 39, 40, 56, 80, 119	10, 18, 43, 86, 97, 112, 145, 151 Activity 1, 2, 3, 4, 5,
PO3. Use median, mode, and range to describe the distribution of a given data set.	122, 150 Range in other problems 45, 69, 141	Activity 4, 5, 14
PO4. Compare two sets of related data.	20, 25, 56, 119	Activity 1, 2, 3, 4, 5
Concept 2: Probability		
PO1. Describe elements of theoretical probability by listing or drawing all possible outcomes of a given event and predicting the outcome using word and number benchmarks.	5, 77	85, 121 Activity 1, 2, 6, 7

*Gives opportunity to teach specific State Standard

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lessons Activity Numbers
Concept 3: Systematic Listing and Counting.		
PO1. Construct tree diagrams to solve problems in context by <ul style="list-style-type: none"> • representing all possibilities for a variety of counting problems, • explaining how its properties relate to the problem, • representing the same counting problem in multiple ways, • drawing conclusions. 	*5, *6, *23, 25, *48, *56	*12, 121 Activity 7 Venn Diagrams 145, 151
PO2. Justify that all possibilities have been enumerated without duplication.	5, *23, *56, 77	12, 121 Activity 7
Concept 4: Vertex-Edge Graphs		
PO1. Demonstrate the connection between map coloring and vertex coloring.	*44	24, *32, *65, *94, *110, *119 Activity *12, *13
PO2. Construct vertex-edge graphs to represent concrete situations and identify paths and circuits.	*44	24, *32, *65, *94, *110, *119 Activity *12, *13
PO3. Solve conflict problems by constructing and coloring vertex-edge graphs.	*44	24, *32, *65, *94, *110, *119 Activity *12, *13

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lessons Activity Numbers
------------------------	---------------------------	----------------------------------

Strand 3: Patterns, Algebra, and Functions

Concept 1: Patterns

PO1. Recognize, describe, create, extend, and find missing terms in a numerical sequence involving whole numbers using all four basic operations	6, 23, 25, 48, 56, 58, 101, 103, 113, 117, 152	12, 13, 16, 35, 60, 62, 77, 116, 124, 130, 136, 138
PO2. Explain the rule for a given numerical sequence, verify that the rule works, and use the rule to make predictions.	6, 23, 25, 48, 56, 58, 101, 103, 113, 117, 152	12, 13, 16, 35, 60, 62, 77, 116, 124, 130, 136, 138

Concept 2: Functions and Relationships (moved to grade 2)

Concept 3: Algebraic Representations

PO1. Use a symbol to represent an unknown quantity in a simple algebraic expression involving all operations.	22, 34, 87, 134, 152	9, 15, 19, 20, 28, 31, 39, 45, 52, 56, 69, 75, 80, 89, 90, 93, 99, 104, 109, 128, 143
PO2. Create and solve one-step equations that can be solved using addition, subtraction, multiplication, and division of whole numbers.	1, 9, 14, 19, 22, 26, 31, 33, 34, 35, 41, 54, 64, 72, 87, 92, 95, 105, 122, 123, 124, 134, 139, 152	3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 25, 26, 28, 30, 31, 39, 43, 45, 48, 52, 56, 62, 67, 69, 75, 76, 77, 80, 87, 89, 90, 91, 92, 93, 95, 96, 102, 104, 105, 109, 114, 118, 121, 128, 129, 130, 136, 138, 143, 148 Activity 10

Concept 4: Analysis of Change

PO1. Identify the change in a quantity over time and make simple predictions.	25, *56	12, 16, 35, 62, 77, 116, 124, 130, 136, 138
---	---------	---

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lessons Activity Numbers
------------------------	---------------------------	----------------------------------

Strand 4: Geometry and Measurement		
Concept 1: Geometric Properties		
PO1. Draw and describe the relationships between points, lines, line segments, rays, and angles including parallelism and perpendicularity.	37, 38, 70, 132 Parts of Circle 71	Activity 4
PO2. Justify which objects in a collection match a given geometric description.	15, 37, 38, 39, 40, 58, 68, 98, 144	*4, 24, 32, 36, 58, 65, 66, 78, 82, 94, 100, 107, 110, 119, 123, 131 Activity 11, 13
PO3. Describe and classify triangles by angles and sides.	*15, 96, 98	32, 36, 53, 58, 60, 94, 131, 150 Activity 13
PO4. Recognize which attributes (such as shape or area) change and which do not change when 2-dimensional figures are cut up or rearranged.	30, *96, 132	*4, 24, 32, 36, 44, 53, 58, 65, 66, 78, 82, 94, 100, 107, 110, 119, 123, 131 Activity 11, 13
PO5. Recognize and draw congruent figures, and match them in a given collection.	60, 98	*32, *58, *82, *78 Activity *13
PO6. Draw right, acute, obtuse, and straight angles and identify these angles in other geometric figures.	70, 78, 98, 132	*32, *94 Activity *13
PO7. Recognize the relationship between a 3-dimensional figure and its corresponding net(s).	40, 95, 105, *149	*36, *94, 140, 141
Concept 2: Transformation of Shapes (Moved to grade 3)		
Concept 3: Coordinate Geometry		
PO1. Name, locate, and graph points in the first quadrant of the coordinate plane using ordered pairs.	65, 97, 120, 130, 140	
PO2. Plot line segments in the first quadrant of the coordinate plane using a set of ordered pairs in a table.	97, 130	
PO3. Construct geometric figures with vertices at points on the coordinate plane.	120	



Arizona 4th Grade Standards / *Excel* Math Correlation

Standards / Objectives	<i>Excel</i> Math Lesson Numbers	Stretch Lessons Activity Numbers
CONCEPT 4: MEASUREMENT		
PO1. Compute elapsed time to the minute.	18, 19, 57, 66, 90, 92, 111, 124	
PO2. Apply measurement skills to measure length, mass, and capacity using metric units.	29, 30, 37, 63, 64, *92, 121, 123	*49
PO3. Solve problems involving conversions within the same measurement system.	29, 30, 63, 87, 92, 121	*49, 118
PO4. Solve problems involving perimeter of 2-dimensional figures and area of rectangles.	64, 96, 120, 147 Surface area 149 Area of Triangle 155	118, 125, 135, 137, 150 Activity 12, 13 Surface Area Activity 11
PO5. Describe the change in perimeter or area when one attribute (length or width) of a rectangle changes.	68, 96, 120, 147 Volume 95, 105	118, 125, 135, 137, 150 Activity 12, 13

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lessons Activity Numbers
------------------------	---------------------------	----------------------------------

Strand 5: Structure and Logic

Concept 1: Algorithms and Algorithmic Thinking

<p>PO1. Analyze common algorithms for computing (adding, subtracting, multiplying, and dividing) with whole numbers using the associative, commutative, and distributive properties.</p>	<p>14, 24, 27, 28, 35, 36, 42, 43, 52, 53, 59, 72, 74, 82, 89, 105, 138</p>	<p>15, 16, 21, 26, 113, 114, 121, 122, 124</p> <p>Activity 10</p>
--	---	--

Concept 2: Logic, Reasoning, Arguments, and Mathematical Proof

<p>PO1. Analyze a problem situation to determine the question(s) to be answered.</p>	<p>1, 4, 9, 10, 15, 19, 35, 41, 90, 92, 109, 123, 129, 139, 143</p>	<p>1, 2, 5, 10, 12, 13, 14, 16, 18, 21, 22, 23, 26, 27, 29, 30, 33, 34, 37, 38, 40, 41, 42, 43, 46, 47, 48, 50, 51, 54, 55, 57, 59, 61, 62, 63, 64, 70, 71, 72, 73, 74, 76, 79, 81, 83, 84, 86, 87, 88, 91, 95, 97, 98, 101, 102, 103, 104, 106, 108, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 124, 125, 127, 130, 132, 133, 134, 136, 138, 139, 142, 144, 145, 146, 147, 148, 149, 151, 152, 153, 154</p> <p>Activity 7, 8, 9, 10</p>
<p>PO2. Identify relevant, missing, and extraneous information related to the solution to a problem.</p>	<p>1, 4, 9, 10, 15, 19, 35, 41, 90, 92, 109, 123, 129, 139, 143</p>	<p>1, 2, 5, 10, 12, 13, 14, 16, 18, 21, 22, 23, 26, 27, 29, 30, 33, 34, 37, 38, 40, 41, 42, 43, 46, 47, 48, 50, 51, 54, 55, 57, 59, 61, 62, 63, 64, 70, 71, 72, 73, 74, 76, 79, 81, 83, 84, 86, 87, 88, 91, 95, 97, 98, 101, 102, 103, 104, 106, 108, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 124, 125, 127, 130, 132, 133, 134, 136, 138, 139, 142, 144, 145, 146, 147, 148, 149, 151, 152, 153, 154</p> <p>Activity 7, 8, 9, 10</p>
<p>PO3. Select and use one or more strategies to efficiently solve the problem and justify the selection.</p>	<p>1, 4, 9, 10, 15, 19, 35, 41, 90, 92, 109, 123, 129, 139, 143</p>	<p>1, 2, 5, 10, 12, 13, 14, 16, 18, 21, 22, 23, 26, 27, 29, 30, 33, 34, 37, 38, 40, 41, 42, 43, 46, 47, 48, 50, 51, 54, 55, 57, 59, 61, 62, 63, 64, 70, 71, 72, 73, 74, 76, 79, 81, 83, 84, 86, 87, 88, 91, 95, 97, 98, 101, 102, 103, 104, 106, 108, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 124, 125, 127, 130, 132, 133, 134, 136, 138, 139, 142, 144, 145, 146, 147, 148, 149, 151, 152, 153, 154</p> <p>Activity 7, 8, 9, 10</p>



Arizona 4th Grade Standards / *Excel Math* Correlation

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lessons Activity Numbers
PO4. Determine whether a problem to be solved is similar to previously solved problems, and identify possible strategies for solving the problem.	1, 4, 9, 10, 15, 19, 35, 41, 90, 92, 109, 123, 129, 139, 143	1, 2, 5, 10, 12, 13, 14, 16, 18, 21, 22, 23, 26, 27, 29, 30, 33, 34, 37, 38, 40, 41, 42, 43, 46, 47, 48, 50, 51, 54, 55, 57, 59, 61, 62, 63, 64, 70, 71, 72, 73, 74, 76, 79, 81, 83, 84, 86, 87, 88, 91, 95, 97, 98, 101, 102, 103, 104, 106, 108, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 124, 125, 127, 130, 132, 133, 134, 136, 138, 139, 142, 144, 145, 146, 147, 148, 149, 151, 152, 153, 154 Activity 7, 8, 9, 10
PO5. Represent a problem situation using any combination of words, numbers, pictures, physical objects, or symbols.	1, 4, 9, 10, 15, 19, 35, 41, 90, 92, 109, 123, 129, 139, 143	1, 2, 5, 10, 12, 13, 14, 16, 18, 21, 22, 23, 26, 27, 29, 30, 33, 34, 37, 38, 40, 41, 42, 43, 46, 47, 48, 50, 51, 54, 55, 57, 59, 61, 62, 63, 64, 70, 71, 72, 73, 74, 76, 79, 81, 83, 84, 86, 87, 88, 91, 95, 97, 98, 101, 102, 103, 104, 106, 108, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 124, 125, 127, 130, 132, 133, 134, 136, 138, 139, 142, 144, 145, 146, 147, 148, 149, 151, 152, 153, 154 Activity 7, 8, 9, 10
PO6. Summarize mathematical information, explain reasoning, and draw conclusions.	1, 4, 9, 10, 15, 19, 35, 41, 90, 92, 109, 123, 129, 139, 143	1, 2, 5, 10, 12, 13, 14, 16, 18, 21, 22, 23, 26, 27, 29, 30, 33, 34, 37, 38, 40, 41, 42, 43, 46, 47, 48, 50, 51, 54, 55, 57, 59, 61, 62, 63, 64, 70, 71, 72, 73, 74, 76, 79, 81, 83, 84, 86, 87, 88, 91, 95, 97, 98, 101, 102, 103, 104, 106, 108, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 124, 125, 127, 130, 132, 133, 134, 136, 138, 139, 142, 144, 145, 146, 147, 148, 149, 151, 152, 153, 154 Activity 7, 8, 9, 10
PO7. Analyze and evaluate whether a solution is reasonable, is mathematically correct, and answers the question.	1, 4, 9, 10, 15, 19, 35, 41, 90, 92, 109, 123, 129, 139, 143	1, 2, 5, 10, 12, 13, 14, 16, 18, 21, 22, 23, 26, 27, 29, 30, 33, 34, 37, 38, 40, 41, 42, 43, 46, 47, 48, 50, 51, 54, 55, 57, 59, 61, 62, 63, 64, 70, 71, 72, 73, 74, 76, 79, 81, 83, 84, 86, 87, 88, 91, 95, 97, 98, 101, 102, 103, 104, 106, 108, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 124, 125, 127, 130, 132, 133, 134, 136, 138, 139, 142, 144, 145, 146, 147, 148, 149, 151, 152, 153, 154 Activity 7, 8, 9, 10
PO8. Make and test conjectures based on data (or information) collected from explorations and experiments.	1, 4, 9, 10, 15, 19, 35, 41, 90, 92, 109, 123, 129, 139, 143	1, 2, 5, 10, 12, 13, 14, 16, 18, 21, 22, 23, 26, 27, 29, 30, 33, 34, 37, 38, 40, 41, 42, 43, 46, 47, 48, 50, 51, 54, 55, 57, 59, 61, 62, 63, 64, 70, 71, 72, 73, 74, 76, 79, 81, 83, 84, 86, 87, 88, 91, 95, 97, 98, 101, 102, 103, 104, 106, 108, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 124, 125, 127, 130, 132, 133, 134, 136, 138, 139, 142, 144, 145, 146, 147, 148, 149, 151, 152, 153, 154 Activity 7, 8, 9, 10