



Standards / Objectives	Excel Math Lesson Numbers	Stretch Lessons Activity Numbers
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## Strand 1: Number and Operations

### Concept 1: Number Sense

PO 1. Express whole numbers 0 to 1000, in groups of hundreds, tens and ones using and connecting multiple representations.	1, 9, 13, 16, 17, 22, 23, 24, 28, 31, 32, 33, 34, 38, 39, 41, 42, 46, 49, 51, 54, 56, 59, 64, 67, 71, 72, 73, 74, 82, 88, 91, 92, 94, 106, 107, 116, 118, 122, 123, 129, 139, 145, 148	
PO 2. Count forward to 1000 and backward from 1000 by 1s, 10s, and 100s using different starting points.	2, 9, 11, 13, 18, 22, 26, 28, 31, 32, 37, 39, 42, 46, 48, 49, 51, 54, 56, 59, 64, 67, 70, 71, 72, 73, 74, 82, 87, 88, 91, 93, 94, 105, 106, 107, 116, 118, 122, 123, 129, 145	25, 32
PO 3. Identify numbers which are 100 more or less than a given number to 900.	6, 11, *91, <b>97</b>	
PO 4. Compare and order whole numbers through 1000 by applying the concept of place value.	3, 12, 14, 16, 61, 73, 124, 142  Ordinals 7, 73, 76	25, 32, 39, 90, 91, 113, 115, 128, 136, 149, 150, 153
PO 5. Count money to \$1.00.	43, 66, 83, 109, 149  Fractions 63, 80, 120, 126, 150, 155	117  Activity 2 (fractional parts)
PO 6. Sort whole numbers through 1000 into odd and even, and justify the sort.	99, 11	115, 128

### Concept 2: Numerical Operations

PO 1. Solve contextual problems using multiple representations involving <ul style="list-style-type: none"> <li>• addition and subtraction with one- and/or two-digit numbers,</li> <li>• multiplication for 1s, 2s, 5s, and 10s, and</li> <li>• adding and subtracting money to \$1.00.</li> </ul>	11, 13, 22, 27, 39, 42, 43, 56, 66, 81, 83, 86, <b>89, 95, 104, 109, 125, 127, 128, 129</b> , 134, 136, 138, 149	22, 26, 31, 33, 38, 46, 51, 55, 56, 60, 68, 90, 104, 110, 115, 117, 121, 126, 128, 132, 133, 140, 142, 146, 153
PO 2. Demonstrate the ability to add and subtract whole numbers (to at least two digits) and decimals (in the context of money) <ul style="list-style-type: none"> <li>• with up to three addends and</li> <li>• to \$1.00.</li> </ul>	1, 3, 9, 11, 13, 14, 16, 21, 22, 23, 24, 28, 31, 32, 34, 36, 39, 42, 46, 48, 49, 51, 54, 56, 59, 66, 67, 68, 71, 72, 73, 76, 79, 82, 83, 86, 89, 91, 92, 94, 95, 106, 107, 109, 116, 118, 122, 125, 129, 133, 138, 139, 140, 141, 145, 146, 147, 149	22, 26, 31, 33, 38, 46, 51, 56, 60, 68, 82, 90, 104, 110, 115, 117, 123, 125, 126, 130, 132, 133, 134, 136, 140, 143, 146, 150, 153

\*Gives opportunity to teach specific State Standard



## Arizona 2<sup>nd</sup> Grade Standards / *Excel Math* Correlation

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PO 3. Demonstrate fluency of addition and subtraction facts.	1, 2, 3, 4, 7, 8, 9, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 23, 24, 26, 28, 31, 32, 34, 36, 37, 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, 84, 87, 90, 92, 95, 98, 99, 101, 102, 103, 106, 107, 108, 109, 111, 112, 114, 116, 126, 131, 133, 137, 138, 139, 140, 141, 142, 146, 147, 148, 152	22, 26, 31, 33, 38, 46, 51, 56, 60, 68, 130, 134, 143, 147, 150, 153
PO 4. Apply and interpret the concept of addition and subtraction as inverse operations to solve problems.	1, 13, 20, 42, 56, 67  Division / Multiplication 136, 137, 152	
PO 5. Create and solve word problems based on addition and subtraction of two-digit numbers.	27, 66, 81, 95, 97, 104  Division 153, 154	30, 33, 49, 72, 76, 83, 90, 99, 104, 108, 110, 115, 117, 121, 123, 126, 128, 130, 131, 132, 133, 136, 140, 146, 150, 153, 154  Activity 7
PO 6. Demonstrate the concept of multiplication for 1s, 2s, 5s, and 10s.	95, 108, 121, 124, 125, 126, 131, 132, 133, 134, 137, 138, 140, 141, 142, 144, 146, 147, 148, 149, 152, 154  Division 77, 111, 113, 114, 115, 120, 127, 128, 136, 137, 152, 153, 154	101, 109, 110, 114, 119, 134, 137, 143, 147, 155
PO 7. Describe the effect of operations (addition and subtraction) on the size of whole numbers.	1, 3, 9, 11, 13, 14, 16, 20, 22, 23, 24, 28, 31, 32, 34, 36, 38, 39, 42, 46, 48, 49, 51, 54, 56, 59, 67, 71, 72, 73, 82, 88, 91, 92, 94, 95, 102, 104, 106, 107, 116, 118, 121, 122, 125, 129, 131, 133, 141, 145	33, 90, 110, 115, 125, 131, 136
PO 8. Apply properties to solve addition/subtraction problems  <ul style="list-style-type: none"> <li>• identity property of addition/subtraction,</li> <li>• commutative property of addition, and</li> <li>• associative property of addition.</li> </ul>	1, 13, 20, 28, 36, 42, 56, *102	*33
<b>Concept 3: Estimation</b>		
PO 1. Use estimation to determine if sums of two 2-digit numbers are more or less than 20, more or less than 50, or more or less than 100.	*76, *122  Time: 134, 143	22, 26, 31, 33, 38, 41, 45, 46, 51, 52, 56, 57, 60, 61, 65, 68, 70, 75, 79, 80, 82, 87, 90, 95, 99, 101, 109, 110, 114, 115, 117, 119, 125, 130, 134, 136, 137, 143, 147, 150, 155

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## Strand 2: Data Analysis, Probability, and Discrete Mathematics

### Concept 1: Data Analysis (Statistics)

PO 1. Collect, record, organize, and display data using pictographs, frequency tables, or single bar graphs.	5	55, 104 Activity 5
PO 2. Formulate and answer questions by interpreting displays of data, including pictographs, frequency tables, or single bar graphs.	5, 15, 35, 50, 105	55, 104 Activity 5

### Concept 2: Probability

In Grade 2, there are no performance objectives in this concept

### Concept 3: Systematic Listing and Counting.

PO 1. List all possibilities in counting situations.	25, 35, 100	33, 50, 81, 110 Activity 1, 4
PO 2. Solve a variety of problems based on the addition principle of counting.	5, 15, 22, 23, 24, 31, <b>32</b> , 46, 49, 50, 51, 56, 59, 71, 72, 88, 94, 95, 102, 104, 121, 122, 125, 131	22, 26, 31, 33, 38, 40, 46, 51, 55, 56, 60, 68, 90, 99, 104, 110, 118, 121, 132 Activity 1

### Concept 4: Vertex-Edge Graphs

PO 1. Color simple pictures or maps using the least number of colors and justify the coloring.	*10	36, 85
PO 2. Build vertex-edge graphs using concrete materials and explore simple properties of vertex-edge graphs <ul style="list-style-type: none"> <li>• number of vertices and edges,</li> <li>• neighboring vertices, and</li> <li>• paths in a graph.</li> </ul>		*27, *36, *85
PO 3. Construct simple vertex-edge graphs from simple pictures or maps.		*27, *36, *85

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## Strand 3: Patterns, Algebra, and Functions

### Concept 1: Patterns

PO 1. Recognize, describe, extend, create, and find missing terms in a numerical or symbolic pattern.	2, 18, 26, 37, 47, 70, 87, 93, 96, 101, 121	25, 32, 42, 47, 97, 110, 124, 151, 152
PO 2. Explain the rule for a given numerical or symbolic pattern and verify that the rule works.	2, 18, 26, 37, 47, 70, 87, 93, 96, 101, 121	25, 32, 42, 47, 97, 110, 124, 151, 152

### Concept 2: Functions and Relationships

PO 1. Describe a rule that represents a given relationship between two quantities using words or pictures	3, *10, 12, 15, *38, 47, 52, 70, 87, 93, 101	47, 97, 124, 151
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### Concept 3: Algebraic Representations

PO 1. Record equivalent forms of whole numbers to 1000 by constructing models and using numbers	38, 52, 58, 83, 102, 103, *117, 124	55, 100, 118, 131, 142
PO 2. Compare expressions using spoken words and the symbols =, ≠, <, and >.	12, 20, 21, 38, 52, 58, 83, 102, 103, <b>112</b> , 117, 121, 124, 142	55, 80, 100, 118, 119, 131
PO 3. Represent a word problem requiring addition or subtraction through 100 using an equation.	27, 57, 77, 81, 97, 104, 125, 127, 128  Division 153, 154	30, 40, 49, 55, 67, 71, 72, 76, 83, 90, 99, 100, 108, 110, 118, 121, 123, 126, 128, 131, 132, 133, 140, 146, 150, 154  Activity 7
PO 4. Identify the value of an unknown number in an equation involving an addition or subtraction fact.	38, 52, 58, 103	21, 41, 45, 52, 57, 61, 65, 70, 75, 80, 82, 87, 95, 96, 101, 109, 114, 119, 125, 130, 134, 137, 143, 147, 155

### Concept 4: Analysis of Change

In Grade 2, there are no performance objectives in this concept.

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## Strand 4: Geometry and Measurement

### Concept 1: Geometric Properties

PO 1. Describe and compare the attributes of polygons up to six sides using the terms side, vertex, point, and length	7, 8, 10, 78, 101, 144  Three dimensional 110	21, 23, 24, 34, 62, 66, 74, 77, 92, 94, 96, 103, 105, 112, 127, 129, 138, 139, 144  Activity 9, 10, 13
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### Concept 2: Transformation of Shapes

PO 1. Identify, with justification, whether a 2-dimensional figure has lines of symmetry	75  Slide, Flip, Turn 135	*139  Activity 12
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### Concept 3: Coordinate Geometry

In Grade 2, there are no performance objectives in this concept.

### CONCEPT 4: MEASUREMENT

PO 1. Tell time to the nearest minute using analog and digital clocks.	19, 29, 45, 62, 69, 89, 98, 134, 143	
PO 2. Apply measurement skills to measure the attributes of an object (length, capacity, weight).	53, 55, 60, 65, 84, 85  Area 90  Perimeter 132	Measurement Act (Vol) 1, 2, 3, 4, 5, 6, 7, 8  Measurement Act (Wgt) 1, 2, 3, 4, 5, 6, 7  Measurement Act (Dist) 1, 2, 3, 4, 5, 6  Activity 11
PO 3. Read temperatures on a thermometer using Fahrenheit and Celsius.	53	
PO 4. Demonstrate unit conversions <ul style="list-style-type: none"> <li>• 1 foot = 12 inches,</li> <li>• 1 quart = 4 cups, 1 pound = 16 ounces,</li> <li>• 1 hour = 60 minutes, 1 day = 24 hours, 1 week = 7 days, and 1 year = 12 months</li> </ul>	44, 55, 89, 151	

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## Strand 5: Structure and Logic

### Concept 1: Algorithms and Algorithmic Thinking

In Grade 2, there are no performance objectives in this concept

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

PO 1. Identify the question(s) asked and any other questions that need to be answered in order to find a solution.	27, 30, 33, 40, 57, 81, 104, 111, 113, 114, 115, 116, 127, 128, 130, 134, 153	28, 29, 30, 35, 37, 40, 43, 44, 48, 49, 53, 54, 58, 59, 63, 64, 67, 69, 71, 72, 73, 76, 78, 79, 81, 83, 84, 86, 88, 89, 93, 98, 99, 100, 102, 106, 107, 108, 110, 111, 116, 117, 120, 121, 122, 123, 126, 132, 135, 140, 141, 142, 145, 148, 154 Activity 3, 4, 5, 6, 7, 8, 14
PO 2. Identify the given information that can be used to find a solution.	27, 30, 33, 40, 57, 81, 104, 111, 113, 114, 115, 116, 127, 128, 130, 134, 153	28, 29, 30, 35, 37, 40, 43, 44, 48, 49, 53, 54, 58, 59, 63, 64, 67, 69, 71, 72, 73, 76, 78, 79, 81, 83, 84, 86, 88, 89, 93, 98, 99, 100, 102, 106, 107, 108, 110, 111, 116, 117, 120, 121, 122, 123, 126, 132, 135, 140, 141, 142, 145, 148, 154 Activity 3, 4, 5, 6, 7, 8, 14
PO 3. Select from a variety of problem-solving strategies and use one or more strategies to arrive at a solution.	27, 30, 33, 40, 57, 81, 104, 111, 113, 114, 115, 116, 127, 128, 130, 134, 153	28, 29, 30, 35, 37, 40, 43, 44, 48, 49, 53, 54, 58, 59, 63, 64, 67, 69, 71, 72, 73, 76, 78, 79, 81, 83, 84, 86, 88, 89, 93, 98, 99, 100, 102, 106, 107, 108, 110, 111, 116, 117, 120, 121, 122, 123, 126, 132, 135, 140, 141, 142, 145, 148, 154 Activity 3, 4, 5, 6, 7, 8, 14
PO 4. Represent a problem situation using any combination of words, numbers, pictures, physical objects, or symbols.	27, 30, 33, 40, 57, 81, 104, 111, 113, 114, 115, 116, 127, 128, 130, 134, 153	28, 29, 30, 35, 37, 40, 43, 44, 48, 49, 53, 54, 58, 59, 63, 64, 67, 69, 71, 72, 73, 76, 78, 79, 81, 83, 84, 86, 88, 89, 93, 98, 99, 100, 102, 106, 107, 108, 110, 111, 116, 117, 120, 121, 122, 123, 126, 132, 135, 140, 141, 142, 145, 148, 154 Activity 3, 4, 5, 6, 7, 8, 14
PO 5. Explain and clarify mathematical thinking.	27, 30, 33, 40, 57, 81, 104, 111, 113, 114, 115, 116, 127, 128, 130, 134, 153	28, 29, 30, 35, 37, 40, 43, 44, 48, 49, 53, 54, 58, 59, 63, 64, 67, 69, 71, 72, 73, 76, 78, 79, 81, 83, 84, 86, 88, 89, 93, 98, 99, 100, 102, 106, 107, 108, 110, 111, 116, 117, 120, 121, 122, 123, 126, 132, 135, 140, 141, 142, 145, 148, 154 Activity 3, 4, 5, 6, 7, 8, 14
PO 6. Determine whether a solution is reasonable.	27, 30, 33, 40, 57, 81, 104, 111, 113, 114, 115, 116, 127, 128, 130, 134, 153	28, 29, 30, 35, 37, 40, 43, 44, 48, 49, 53, 54, 58, 59, 63, 64, 67, 69, 71, 72, 73, 76, 78, 79, 81, 83, 84, 86, 88, 89, 93, 98, 99, 100, 102, 106, 107, 108, 110, 111, 116, 117, 120, 121, 122, 123, 126, 132, 135, 140, 141, 142, 145, 148, 154 Activity 3, 4, 5, 6, 7, 8, 14