Arizona 5th Grade Standards / *Excel* Math Correlation

Standards / Objectives	*Excel* Math Lesson Numbers	Stretch Lessons Activity Numbers
Strand 1: Number and Operations		
Concept 1: Number Sense		
PO1 Determine equivalence by converting between benchmark fractions, decimals, and percents.	3, 4, 15, 31, 39, 59, 65, 68, 76, 83, 99, 100, 106, 109, 112, 113, 116, 117, 118, 125, 127, 130, 136	Activity 14
PO2 Differentiate between prime and composite numbers; differentiate between factors and multiples for whole numbers.	1, 11**, 28, 29, 38**, 49, **61**, **62, 88, 91, 93,** 97	149
PO3 Locate integers on a number line.	89, 148, 150, 151	82, 91, 97
PO4 Compare and order positive fractions, decimals, and percents.	43, 65, 68, 76, 77, 78, 83, 85, 98, 100, 105, 111, 121, 130, 136, 142, 148, 149 Ordinals 13, 98	Activity 14
PO5 *Use ratios and unit rates to model, describe and extend problems in context.*	55, 97, *114	133, 137, 144
PO6 Express or interpret positive and negative numbers in context.	*1, *80, 82, *87, 89, 104, 111, 123, 150, 151, 154, 155	82, 91, 97
Concept 2: Numerical Operations		
PO1 Add and subtract decimals through thousandths and fractions expressing solutions in simplest form.	3, 4, 23, 50, 59, 66, 69, 82, 92, 99, 122 Multiply / Divide 41, 47, 49, 79, 81, 83, 94, 100, 107, 110, 118, 120, 126, 129, 131, 132, 133, 135, 146, 149, 153	13, 18, 20, 64, 79, 80, 89, 119, 121, 129, 132 Activity 7
PO2 Multiply multi-digit whole numbers.	2, 11, 16, 21, 22, 23, 28, 36, 46, 47, 49, 73, 81, 113, 119, 139	70, 84, 125, 146, 155
PO3 Divide multi-digit whole numbers by whole number divisors with and without remainders.	9, 11, 21, 26, 27, 29, 33, 34, 36, 38, 44, 46, 47, 49, 71, 73, 74, 86, 94, 101, 106, 107, 111, 119, 121, 128, 141, 146	8, 44, 84, 125, 127, 130
PO4 Apply the associative, commutative, and distributive properties to solve numerical problems.	14, 18, 28, 96, 108	21, 120, 155

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PO5 Simplify numerical expressions (including fractions and decimals) using the order of operations with or without grouping symbols.	14, 18, 96, 108, 127	21, 110, 120, 127, 129, 130, 147, 155
Concept 3: Estimation		
PO1 Make estimates appropriate to a given situation or computation with whole numbers, fractions, and decimals.	12, 25, 41, 82, 92	2, 3, 12, 21, 41, 52, 61, 69, **70**, 84, 87, 92, 150 Activity 7
Strand 2: Data Analysis, Probability, and Discrete Mathematics		
Concept 1: Data Analysis (Statistics)		
PO1 Collect, record, organize, and display data using multi-bar graphs or double line graphs.	5, 13, 20, 40, 55, 116	5, 11, 31 Activity 4, 6
PO2 Formulate and answer questions by interpreting and analyzing displays of data, including multi-bar graphs or double line graphs.	5, 13, 20, 40, 55, 116	5, 11, 31 Activity 4, 6
PO3 Use mean, median, mode, and range to analyze and describe the distribution of a given data set.	25, 115 Averages 102, 103, 135	Averages 130
Concept 2: Probability		
PO1 Describe the theoretical probability of events and represent the probability as a fraction, decimal, or percent.	60, 117, 142 Possibilities 58	Activity 6 Possibilities 65, 118, 123, Activity 4
PO2 Explore probability when performing experiments by • predicting the outcome, • recording the data, • comparing outcomes of the experiment to predictions, and • comparing the results of multiple repetitions of the experiment.	60, 117, 142	Activity 4, 6

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Concept 3: Systematic Listing and Counting.		
PO1 Analyze relationships among representations and make connections to the multiplication principle of counting.	13, 24, 29, 138	7, 9, 24, 47, 59, *118
PO2 Solve a variety of counting problems and explain the multiplication principle of counting.	13, 24, 29, 138	7, 9, 24, 47, 59, *118
Concept 4: Vertex-Edge Graphs		
PO1 Investigate properties of vertex-edge graphs • Euler paths, • Euler circuits, • degree of a vertex.	Coordinate Points 52, 64, 90, 95, 123, 140 Venn diagrams 53	*15, *73 **Activity 11**
PO2 Solve problems related to Euler paths and circuits.		*15, *73 **Activity 11**
Strand 3: Patterns, Algebra, and Functions		
Concept 1: Patterns		
PO1 Recognize, describe, create, and analyze a numerical sequence involving fractions and decimals using addition and subtraction.	13, 55, 97, 111 Whole Numbers 6, 87, 104, 143 Objects 42, 86	105 Whole Numbers 27, 24, 47, 59, 96, 103, 150 Objects 45, 131
Concept 2: Functions and Relationships		
Concept 3: Algebraic Representations		
PO1 Create and solve two-step equations that can be solved using inverse operations with whole numbers.	1, 2, 11, 18, 19, 32, 37, 44, 48, 55, 66, 73, **74**, 77, 79, 82, 97, 102, 103, 108, 114, **124**, 140, 143	1, 2, 4, 5, 7, 9, 12, 18, 21, 24, 29, 31, 32, 41, 47, 52, 59, 61, 72, 79, 80, 81, 87, 92, 96, 99, 103, 105, 106, 107, 109, 110, 111, 116, 120, 121, 125, 129, 130, 138, 141, 145, 155
Concept 4: Analysis of Change		
PO1 Describe patterns of change including constant rate and increasing or decreasing rate.	13, 55, *74, 97, 114	7, 9, 24, 47, 59, 105

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Strand 4: Geometry and Measurement		
Concept 1: Geometric Properties		
PO1 Draw and label 2-dimensional figures given specific attributes including angle measure and side length.	30, 42, 45, 71, 75, 95, 144, 145	22, 25, 34, 40, 43, 49, 50, 60, 63, 71, 78, 85, 88, 100, 104, 106, 112, 136
PO2 Solve problems by understanding and applying the property that the sum of the interior angles of a triangle is 180˚.	30, *45, *144	*71, *136
PO3 Classify quadrilaterals by their properties.	42, *45, 71, 95	71, 88, 100, 106
PO4 Compare attributes of 2-dimensional figures with 3-dimensional figures by drawing and constructing nets and models.	20, 72, 84	*15, 76, 93, 94, 128, 134, 142 Activity 9, 10, 11, 12, 13
Concept 2: Transformation of Shapes		
Concept 3: Coordinate Geometry		
Concept 4: Measurement		
PO1 Solve problems using elapsed time.	7, 8, 51, 57, 73	5, 31
PO2 State an appropriate measure and degree of accuracy in a given context.	12, 17, 48, 67, 114	106
PO3 Measure angles between 0 and 360 degrees.	30, 75	
PO4 Solve problems involving the area of 2-dimensional figures by using the properties of parallelograms and triangles.	35, 56, 63, 95, 134 Triangle 144 Circle 145	106, 122
PO5 Solve problems involving area and perimeter of regular and irregular polygons using reallotment of square units.	54, 63, 95, 152 Surface Area 137	106, 122, 138, 139, 140, 147 Activity 8 Surface Area / Volume Activity 9, 13

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Strand 5: Structure and Logic		
Concept 1: Algorithms and Algorithmic Thinking		
PO1 *Analyze common algorithms for adding and subtracting fractions and decimals using the associative, commutative, and distributive properties.*	23, 39, 50, 66, 69, 76, 77, 82, 122 Multiply / Divide 81, 94, 100, 107, 110, 126, 129, 131, 132, 147, 153	
PO2 Develop an algorithm or formula to calculate areas and perimeters of simple polygons.	54, 56, 63, 95, 134, 144 Volume 72, 84	122 Volume 143, Activity 9, 13
Concept 2: Logic, Reasoning, Arguments, and Mathematical Proof		
PO1 *Analyze a problem situation to determine the question(s) to be answered. *	7, 10, 16, 25, 29, 51, 70, 74	2, 3, 5, 6, 8, 9, 10, 11, 14, 16, 17, 19, 23, 26, 27, 28, 29, 30, 31, 33, 35, 36, 37, 38, 39, 42, 44, 46, 47, 48, 51, 53, 54, 55, 56, 57, 58, 59, 61, 62, 64, 66, 67, 68, 69, 70, 72, 74, 75, 77, 79, 80, 83, 84, 86, 87, 89, 90, 92, 95, 96, 98, 99, 101, 102, 103, 106, 107, 108, 111, 113, 114, 115, 116, 117, 119, 120, 121, 123, 124, 125, 126, 127, 130, 131, 133, 135, 137, 138, 145, 148, 149, 150, 151, 152, 153, 154 Activity 1, 2, 3, 4
PO2 Identify relevant, missing, and extraneous information related to the solution to a problem.	7, 10, 16, 25, 29, 51, 70, 74	2, 3, 5, 6, 8, 9, 10, 11, 14, 16, 17, 19, 23, 26, 27, 28, 29, 30, 31, 33, 35, 36, 37, 38, 39, 42, 44, 46, 47, 48, 51, 53, 54, 55, 56, 57, 58, 59, 61, 62, 64, 66, 67, 68, 69, 70, 72, 74, 75, 77, 79, 80, 83, 84, 86, 87, 89, 90, 92, 95, 96, 98, 99, 101, 102, 103, 106, 107, 108, 111, 113, 114, 115, 116, 117, 119, 120, 121, 123, 124, 125, 126, 127, 130, 131, 133, 135, 137, 138, 145, 148, 149, 150, 151, 152, 153, 154 Activity 1, 2, 3, 4

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PO3 *Select and use one or more strategies to efficiently solve the problem and justify the selection. *	7, 10, 16, 25, 29, 51, 70, 74	2, 3, 5, 6, 8, 9, 10, 11, 14, 16, 17, 19, 23, 26, 27, 28, 29, 30, 31, 33, 35, 36, 37, 38, 39, 42, 44, 46, 47, 48, 51, 53, 54, 55, 56, 57, 58, 59, 61, 62, 64, 66, 67, 68, 69, 70, 72, 74, 75, 77, 79, 80, 83, 84, 86, 87, 89, 90, 92, 95, 96, 98, 99, 101, 102, 103, 106, 107, 108, 111, 113, 114, 115, 116, 117, 119, 120, 121, 123, 124, 125, 126, 127, 130, 131, 133, 135, 137, 138, 145, 148, 149, 150, 151, 152, 153, 154 Activity 1, 2, 3, 4
PO4 *Determine whether a problem to be solved is similar to previously solved problems, and identify possible strategies for solving the problem.*	7, 10, 16, 25, 29, 51, 70, 74	2, 3, 5, 6, 8, 9, 10, 11, 14, 16, 17, 19, 23, 26, 27, 28, 29, 30, 31, 33, 35, 36, 37, 38, 39, 42, 44, 46, 47, 48, 51, 53, 54, 55, 56, 57, 58, 59, 61, 62, 64, 66, 67, 68, 69, 70, 72, 74, 75, 77, 79, 80, 83, 84, 86, 87, 89, 90, 92, 95, 96, 98, 99, 101, 102, 103, 106, 107, 108, 111, 113, 114, 115, 116, 117, 119, 120, 121, 123, 124, 125, 126, 127, 130, 131, 133, 135, 137, 138, 145, 148, 149, 150, 151, 152, 153, 154 Activity 1, 2, 3, 4
PO5 *Represent a problem situation using any combination of words, numbers, pictures, physical objects, or symbols. *	7, 10, 16, 25, 29, 51, 70, 74	2, 3, 5, 6, 8, 9, 10, 11, 14, 16, 17, 19, 23, 26, 27, 28, 29, 30, 31, 33, 35, 36, 37, 38, 39, 42, 44, 46, 47, 48, 51, 53, 54, 55, 56, 57, 58, 59, 61, 62, 64, 66, 67, 68, 69, 70, 72, 74, 75, 77, 79, 80, 83, 84, 86, 87, 89, 90, 92, 95, 96, 98, 99, 101, 102, 103, 106, 107, 108, 111, 113, 114, 115, 116, 117, 119, 120, 121, 123, 124, 125, 126, 127, 130, 131, 133, 135, 137, 138, 145, 148, 149, 150, 151, 152, 153, 154 Activity 1, 2, 3, 4
PO6 *Summarize mathematical information, explain reasoning, and draw conclusions.*	7, 10, 16, 25, 29, 51, 70, 74	2, 3, 5, 6, 8, 9, 10, 11, 14, 16, 17, 19, 23, 26, 27, 28, 29, 30, 31, 33, 35, 36, 37, 38, 39, 42, 44, 46, 47, 48, 51, 53, 54, 55, 56, 57, 58, 59, 61, 62, 64, 66, 67, 68, 69, 70, 72, 74, 75, 77, 79, 80, 83, 84, 86, 87, 89, 90, 92, 95, 96, 98, 99, 101, 102, 103, 106, 107, 108, 111, 113, 114, 115, 116, 117, 119, 120, 121, 123, 124, 125, 126, 127, 130, 131, 133, 135, 137, 138, 145, 148, 149, 150, 151, 152, 153, 154 Activity 1, 2, 3, 4

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PO7 *Analyze and evaluate whether a solution is reasonable, is mathematically correct, and answers the question.*	7, 10, 16, 25, 29, 51, 70, 74	2, 3, 5, 6, 8, 9, 10, 11, 14, 16, 17, 19, 23, 26, 27, 28, 29, 30, 31, 33, 35, 36, 37, 38, 39, 42, 44, 46, 47, 48, 51, 53, 54, 55, 56, 57, 58, 59, 61, 62, 64, 66, 67, 68, 69, 70, 72, 74, 75, 77, 79, 80, 83, 84, 86, 87, 89, 90, 92, 95, 96, 98, 99, 101, 102, 103, 106, 107, 108, 111, 113, 114, 115, 116, 117, 119, 120, 121, 123, 124, 125, 126, 127, 130, 131, 133, 135, 137, 138, 145, 148, 149, 150, 151, 152, 153, 154 Activity 1, 2, 3, 4
PO8 *Make and test conjectures based on data or information collected from explorations and experiments.*	7, 10, 16, 25, 29, 51, 70, 74	2, 3, 5, 6, 8, 9, 10, 11, 14, 16, 17, 19, 23, 26, 27, 28, 29, 30, 31, 33, 35, 36, 37, 38, 39, 42, 44, 46, 47, 48, 51, 53, 54, 55, 56, 57, 58, 59, 61, 62, 64, 66, 67, 68, 69, 70, 72, 74, 75, 77, 79, 80, 83, 84, 86, 87, 89, 90, 92, 95, 96, 98, 99, 101, 102, 103, 106, 107, 108, 111, 113, 114, 115, 116, 117, 119, 120, 121, 123, 124, 125, 126, 127, 130, 131, 133, 135, 137, 138, 145, 148, 149, 150, 151, 152, 153, 154 Activity 1, 2, 3, 4
PO9 Identify simple valid arguments using *if…then* statements based on graphic organizers.	7, 10, 16, 25, 29, 51, 70, 74	2, 3, 5, 6, 8, 9, 10, 11, 14, 16, 17, 19, 23, 26, 27, 28, 29, 30, 31, 33, 35, 36, 37, 38, 39, 42, 44, 46, 47, 48, 51, 53, 54, 55, 56, 57, 58, 59, 61, 62, 64, 66, 67, 68, 69, 70, 72, 74, 75, 77, 79, 80, 83, 84, 86, 87, 89, 90, 92, 95, 96, 98, 99, 101, 102, 103, 106, 107, 108, 111, 113, 114, 115, 116, 117, 119, 120, 121, 123, 124, 125, 126, 127, 130, 131, 133, 135, 137, 138, 145, 148, 149, 150, 151, 152, 153, 154 Activity 1, 2, 3, 4
PO10 Construct *if… then* statements to generalize rules for computation, geometric properties and algebraic functions.	7, 10, 16, 25, 29, 51, 70, 74	2, 3, 5, 6, 8, 9, 10, 11, 14, 16, 17, 19, 23, 26, 27, 28, 29, 30, 31, 33, 35, 36, 37, 38, 39, 42, 44, 46, 47, 48, 51, 53, 54, 55, 56, 57, 58, 59, 61, 62, 64, 66, 67, 68, 69, 70, 72, 74, 75, 77, 79, 80, 83, 84, 86, 87, 89, 90, 92, 95, 96, 98, 99, 101, 102, 103, 106, 107, 108, 111, 113, 114, 115, 116, 117, 119, 120, 121, 123, 124, 125, 126, 127, 130, 131, 133, 135, 137, 138, 145, 148, 149, 150, 151, 152, 153, 154 Activity 1, 2, 3, 4