College and Career Readiness Standards for Adult Education
Overview Format

DOMAIN: Number and Operations: Base Ten and The Number System (Levels C & D)

STANDARD STATEMENTS LEVEL A	STANDARD STATEMENTS LEVEL B	STANDARD STATEMENTS LEVEL C	STANDARD STATEMENTS LEVEL D
Understand place value. Only to two-digit positive whole numbers	**Understand place value.** Three-digit whole numbers Counts by hundreds Skip count by 5, 10, 100's	**Generalize place value understanding for multi-digit whole numbers.** Multi-digit whole numbers Recognize ten times a number Expanded form with numbers and exponents	
Use place value understanding and the properties of operations to add and subtract. Use properties of numbers and concrete models and drawings	**Use place value understanding and properties of operations to add and subtract.** Up to four two-digit numbers Mentally add 10 or 100 to numbers	**Use place value understanding and properties of operations to perform multi-digit arithmetic.** Multiply a 4-digit whole number by a 1-digit whole number, using properties of operation Use arrays, equations, area models Divide 4-digit dividends and 1-digit divisors, using various strategies	
	Use place value understanding and properties of operations to perform multi-digit arithmetic. Fluency of addition and subtraction within 1000 Multiply one digit numbers by multiples of 10 Round to nearest 10 or 100	**Understand the place value system.** Digits represent 10 times or 1/10 of place next door Explain patterns of 0 in multiplying and dividing powers of 10 Compare and expand decimals to thousandths	
		Perform operations with multi-digit whole numbers and with decimals to hundredths. Use decimals to hundredths, using concrete models or drawings	**Apply and extend previous understandings of numbers to the system of rational numbers.** Includes positive and negative numbers Use absolute value
		Compute fluently with multi-digit numbers and find common factors and multiples. Find greatest common factor of 2 whole numbers less than 100 Find least common multiple of 2 whole numbers less than 13 Use distributive property	**Know that there are numbers that are not rational, and approximate them by rational numbers.** Estimate $\sqrt{2}$

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DOMAIN: Number and Operations: Fractions and Number Systems (Level D)

STANDARD STATEMENTS LEVEL A	STANDARD STATEMENTS LEVEL B	STANDARD STATEMENTS LEVEL C	STANDARD STATEMENTS LEVEL D
	Develop understanding of fractions as numbers. Limited to fractions with denominators 2, 3, 4, 6, 8 Simple equivalent fractions Fraction on a number line Whole numbers as fractions Comparing fractions with like denominators	**Extend understanding of fraction equivalence and ordering.** Equivalent fractions – explain Compare different denominators and numerators, by comparing to benchmark ½	**Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.** Properties!
		Build fractions from unit fractions by applying and extending previous understanding of operations on whole numbers. Decompose into sum of fraction Add and subtract mixed numbers with like denominators Multiples of unit fractions Multiply fractions by whole numbers	
		Understand decimal notation for fractions, and compare decimal fractions. **Use equivalent fractions as strategy to add and subtract fractions.** Decimal notations for fractions–10ths and 100ths Unlike denominators (and mixed numbers)	
		Apply and extend previous understanding of multiplication and division to multiply and divide fractions. Multiply fraction by a fraction Multiplication as scaling Divide unit fractions by whole numbers	
		Apply and extend previous understanding of multiplication and division to divide fractions by fractions. Visual models	

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DOMAIN: Ratios and Proportional Relationships

STANDARD STATEMENTS LEVEL A	STANDARD STATEMENTS LEVEL B	STANDARD STATEMENTS LEVEL C	STANDARD STATEMENTS LEVEL D
		Understand ratio concepts and use ratio reasoning to solve problems. Unit rate	**Understand ratio concepts and use ratio reasoning to solve problems.** Tables of equivalent ratios
			Analyze proportional relationships and use them to solve real-world and mathematical problems. Graphing proportions

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DOMAIN: Operations and Algebraic Thinking

STANDARD STATEMENTS LEVEL A	STANDARD STATEMENTS LEVEL B	STANDARD STATEMENTS LEVEL C	STANDARD STATEMENTS LEVEL D
Represent and solve problems involving addition and subtraction. Word problems, and symbol for unknown	**Represent and solve problems involving addition and subtraction.** Within 100 One- and two-step word problems	**Use the four operations with whole numbers to solve problems.** Use variable representation in word problem equations	
Understand and apply properties of operations and the relationship between addition and subtraction. Commutative property; subtraction as an unknown-addend problem	**Add and subtract within 20.** Mental strategies	**Gain Familiarity with factors and multiples.** Determine primes & composites from 1 - 100	
Add and subtract with 20. Fluently use mental math by decomposing, relationship between addition and subtraction	**Represent and solve problems involving multiplication and division.** Within 100 Understand an array Find unknown in multiplication and division equations		
Work with addition and subtraction. Understand sign, vary place of unknown number	**Understand properties of multiplication and the relationship between multiplication and division.** Commutative, associative, distributive properties Division as unknown-factor problem	**Write and interpret numerical expressions.** Interpret grouping brackets w/o calculating expression	
	Multiply and divide within 100. Master multiplication of two one-digit numbers		
	Solve problems using the four operations and identify and explain patterns in arithmetic. Two-step word problems	**Generate and analyze patterns.** Verbalize patterns	

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DOMAIN: Expressions and Equations

STANDARD STATEMENTS LEVEL A	STANDARD STATEMENTS LEVEL B	STANDARD STATEMENTS LEVEL C	STANDARD STATEMENTS LEVEL D
		Apply and extend previous understandings of arithmetic to algebraic expressions. Whole-number exponents Solve one-step equations	**Use properties of operations to generate equivalent expressions.**
		Reason about and solve one-variable equations and inequalities. Inequalities have infinite solutions. Graph on number line	**Solve real-life and mathematical problems using numerical and algebraic expressions and equations.** Inequalities
		Represent and analyze quantitative relationships between dependent and independent variables. Graph relationship between dependent and independent variable	**Work with radicals and integer exponents.** Scientific notation
			Understand the connections between proportional relationships, lines, and linear equations.
			Analyze and solve linear equations and pairs of simultaneous linear equations.

DOMAIN: Functions

STANDARD STATEMENTS LEVEL A	STANDARD STATEMENTS LEVEL B	STANDARD STATEMENTS LEVEL C	STANDARD STATEMENTS LEVEL D
			Define, evaluate, and compare functions.
			Use functions to model relationships between quantities. $y = mx + b$ format

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DOMAIN: Geometry

STANDARD STATEMENTS LEVEL A	STANDARD STATEMENTS LEVEL B	STANDARD STATEMENTS LEVEL C	STANDARD STATEMENTS LEVEL D
Analyze, compare, create, compose shapes. 2- and 3-dimensional; informal language to describe **Reason with shapes and their attributes.** Compose 2-D shapes (including trapezoids, half-circles) and 3-D shapes (cubes, cones, cylinders) to create composite shape	**Reason with shapes and their attributes.** Identify triangles, quadrilaterals, pentagons, hexagons, and cubes Partition shapes into halves, thirds, quarters (fractional parts) Vocabulary of shapes and attributes	**Classify two-dimensional figures into categories based on their properties.** **Solve real-world and mathematical problems involving area, surface area, and volume.** Use area formulas to find area of more complex shapes. Draw polygons on coordinate graph and find lengths of horizontal or vertical sides Use nets to find surface area	**Draw, construct, and describe geometrical figures and describe the relationships between them.** Scale drawings **Solve real-life and mathematical problems involving angle, measure, area, surface area, and volume.**
		Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	**Understand congruence and similarity using physical models, transparencies, or geometry software.**
		Graph points on the coordinate plane to solve real-world and mathematical problems. Introduce coordinate system	**Understand and apply the Pythagorean Theorem.**

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DOMAIN: Measurement (could also be considered Geometry)

STANDARD STATEMENTS LEVEL A	STANDARD STATEMENTS LEVEL B	STANDARD STATEMENTS LEVEL C	STANDARD STATEMENTS LEVEL D
Measure lengths indirectly and by iterating length units. Whole number lengths; many small make one large	**Measure and estimate lengths in standard units.** Inches, feet, centimeters, meters	**Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.** Given area, find length Given area, find possible perimeters	
	Relate addition and subtraction to length. Whole numbers on number line within 100	**Convert like measurement units within given measurement system.** Solve real-world problems	
	Solve problems involving measurement and estimation of intervals of time, liquid, volumes, and masses of objects. Solve time word problems to nearest minute, gram, kilogram, liter One-step word problems with masses or volumes in same unit	**Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.** Unit cube and concept of volume as area of the base times the height	
	Geometric measurement: understand concepts of area and relate to area of multiplication and addition. Area by counting unit squares, addition, and multiplication Area model to show distributive property Recognize area as additive		
	Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures. Real world perimeter problems Find unknown side length Understand differences between perimeter and area		

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DOMAIN: Data and Statistics and Probability (Level D)

STANDARD STATEMENTS LEVEL A	STANDARD STATEMENTS LEVEL B	STANDARD STATEMENTS LEVEL C	STANDARD STATEMENTS LEVEL D
Represent and interpret data. Up to 3 categories	**Represent and interpret data.** Picture graph, bar graph Halves and fourths of inch on ruler	**Represent and interpret data.** Line plot; simple fractional increments	**Summarize and describe distributions.**
		Develop understanding of statistical variability. Measure of central tendency and variability from that center	**Use random sampling to draw inferences about a population.**
		Summarize and describe distribution. Dot plots, histograms and box plots	**Draw informal comparative inferences about two populations.**
			Investigate chance processes and develop, use, and evaluate probability models.
			Investigate patterns of association in bivariate data.