ipdae institute for the professional development of adult educators

ABE Math Curriculum Matrix

Part 2

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Your Facilitator





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Webinar Things to Remember

• If you have a question, please type it into the **Q&A** option.

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			Send Anonymously	

- Attendee microphones will be muted. You will be in listen only mode.
- Today's presentation is being recorded. It will be archived and available on the IPDAE website within 48 hours.

2017 The Institute for the Professional Development of Adult Educators

Agenda



- I. Reinforcing the Importance of the Matrix with CCRS
- II. Alignment to the Florida ABE Mathematics Curriculum Frameworks
- III. Alignment to TABE 11 & 12 Blueprints
- IV. More Benefits to the Teacher/Student
- V. Various Matrix Overlays
- VI. Q&A
- VII. Evaluation



Curriculum Matrix

Open your electronic copy of the ABE Math Curriculum Matrix.

Domain	NRS	Level 1		NRS	Level 2			NRS	Level 3		NRS Level 4			
	Place Value of 2 Digit Number	Add and Submach 2 Clight Numbers	Place Value of 3 Digit Number	Add and Subtract 3 Digit Numbers	Round Whole Numbers to the Nearest Tensor Hundreds	Use Property sof Operations t Pedorm Multi Digit Arithmetic	o Generalize Understanding of Place Value	Read and Write Multi Digit Numbers in Names and Expanded Form	Multiply 4 Digit Numbers by I 10 2 Digit Numbers	Use Place Value to Understand Docimals				
1. Number and Operations: Base Ten	Compare 7 Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3 Digit Numbers	Model Addition and Subtraction of 3-Digit Number	Multiply 1 Ogit Numbers By 2 rs Digt Multiples of 10	Mentally Add and Subtract 10 or 100 to 1 Digit Numbers	Compare Any Multi Digit Number Basic Operations with Multi- Digit Numbers in Standard Algorithm	Round Multi Digit Numberste Any Roce Value Renform Basic Operations on Decimal Numbers Using Multiple Brategies	Divide 4 Digt Numbers by 1 Digt Numbers Round Decimals to Any Place	Read, Witte, and Comparie Decimals to The usandths Divide 4 Digit Numbers by 2 Digit Numbers Using Multiple Strategies				
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20 Commutative and Associative Property of Addition	n The Equal Sign Solving Addition and Subtraction Equations	Solve Addition and Subtraction Problems within 100 Commutative and Associative Property of Multiplication	Solve Multiplication and Division Problems with in 100 Solve Multiplication and Division Equations	Multiplication Facts with in 100 Distributive Property of Multiplication	Solve 2 Step Problems or Equations Model Multiplication and Division within 100	Solve Multi Step Problems Using Basic O perations Check Answers Using Mental Computation and Estimation Write and Interpret Numerical Expressions	Interpret Multiplication as Comparison Statements Solve Problems Involving Multiplicative Comparisons Interpret Expressions without Evaluating Them	Interpret the Remain der In Problems Rind All Factor Pars of Any 2 Digt Whole Number Generate and Analyze Numer and Geometric Patterns	Multiples of 1. Digit Numbers Up to 100 Prime and Composite Number within 100 c Identify in explicit Features of a Pottern from a Rule				
3. Measurement and Data	Organizé, Represent, and Interpret 3 Categories of Data	Indirectly Measure Lengths through Iteration	Analyze and Generate Picture Graphs and Bar Graphs Repites ent Whole Number Lengths on a Number Line	Analyze and Generate Line Plots Measuring and Estimating Areas of Plane Figures	Measure and Estimate Lengths in Standard Units Solike Problems Involving Perimeter of Polygons	Solve Problems Involving Time Volume and Macs Use Areas to Model Ad dition and Multiplication	Solve Problems in Length, Time, Volume, Mass and Money Including Fractions Apply Area and Perimeter Romulas for Rectangles Measure and Sketch Angles in	Solve Problems in Length, Time, Volume, Mass and Money including Decimals Convert Measurements within a System Solve Addition and Subtraction	Solve Problems Involving Information Presented in Line Plots o Organize Unit Praction Data (1/2, 1/4, 1/8) in a Line Plot o	Recognize Angles Understand Concepts of Angle Measurement				
	Analyse, Compare, and Compose 3 Dimensional	2 and 3 Dimensional Composite Shape s	Analyse, Draw and Compare Shapes Having Specified	Identify Common Polygons at 3 Dimensional Agures	nd Categoriae Shapes with Common Attributes	Partition Shapes into Parts with Equip Areas	Whole Number Degrees Draw and identify Points, Lines Line segments, and Rays	Problems for Unknown Angle Solve Problems by Graphing Points on the Coordinate Plan	Solve Problems Involving Area Burface Area, and Volume	Draw Polygons in a Coordinate Plane	Solve Problems Involving Scale Diswings of Geometric Figures	Produce Congruence and Similarity Using Models	Angle Sum and Exterior Angles of Triangles and Transversals	
4. Geometry							Draw and identify Angles, Perpendicular and Paciliei Lines Represent 3 Dimensional	Classify 2 Dimensional Figures Into Categories Based on Properties Use Nets to Find the Surface	8 Rind Areas of Polygons by Composing or Decomposing	Find the Length of a Side with the Same First or Second Coordinate	Solve Problems Involving Angle Meas "Areas, SA and Volume	Recognize Congruence and Similarity from Transformations	Biptain and Apply the Pythagorean Theorem	7
			Rep Risent Fractions with Denominators 2, 3, 4, 6, or 8 or a Number Line	Recognize Equivalent Praction on a Number Line	ns Use Visual Models to Represent Equivalent Fraction	Compare Fractions with the Same Numerator or Denominator	Rgures Using Nets Generate Equivalent Practions	Area of Figure s Compare Fractions Using Common Numerators or Denominators	Decompose Practions as Sum (Practions with the same Decominator	of Decompose Fractions as Multiples of Unit Fractions			011	
5. Number and Operations: Fractions							Use Models to Illustrate Equivalent Fractions Multiply and Divide Fractions	Compare Fractions Using Benchmark Fractions Such as 1/2 Solve Problems Involving	Add and Subtract Mixed Numbers Using Equivalent Practions Convert Fractions with	Multiply Fractions by a Whole Number Solve Problems I no Mint				
							West and Lothorn Simbour	Multiplication and Division of Fractions	Denaminators 10 or 100 to Decimals	Addition and Subtraction of Fractions	And Salest Dotor and	Control Elucation and	Analysis Brancetter of	Eable Rep Many Into Many
6. Expressions and Equations							Expressions with Exponents Portarm the Oxforent Operations on Algebraic Expressions	Equivalent Algebraic Expressions Reason and Solve One Variabil Equitions and Inequalities	If an Equation or Inequality is True In Use Variables to Represent Two Related Quantities in a Problem	Dependent Variable of the Another Quantity UseG mphs, Tables and Equations to Show Variable Relations hips	Regard Linear Expression 5 Rewrite Expressions to Show Relationships Between Quantities Solve SimultaneousLinear	Ine qualifies to Solve Problems Solve Problems U sing Algebra Equations with Rational Coefficients	By point of the state By unvalid to Gore and Routvalent Exaministics in Brahustic Spalar and Cube Roots of Perfect Squares and Cubes	Quantities in Scientific Notation Graph Proportional Relationships: Unit Rate as the Slope
							Ruently Divide Multi Digit Numbers	Fluently Add, Subtract, Multip and Divide Multi Digit Decima	By Find the Greatest Common ils Factor of Two Numbers 5 100	Apply Distributive Property to Generate Equivalent Expressions	Equations in One Variable Use Integers to Represent Quantities in Real World Consexts	Plot/Find Ordered Pairs of Rational Numbers on a Coordinate Plane	Buplain Statements of Order and Inequality U sing a Number Line	Add and Subtract Ration all r Numbers Using a Number Line
7. The Number System							And the Least Common Multiple of Two Numberss 12	Use Models to Illustrate, Interpret and Compute Quotients of Practions	Solve Problems Involving Division of Practions by Fractions		Plot/Find Rational Numbers on a Number Unic Convert a Rational Number to Documal	Understand and Evaluate Absolute Value of Rational Numbers Solve Problems I molving Base Decisions on Rational	Solve Problems by Graphing	Multiply and Divide Rational Numbers Estimate the Location of
8. Ratios and Proportional Relationships							Describe a Relationship Between Two Quantities Using a Ratio	5			Explain the Unit Rate a/b Associated with the Ratio act, with b = 0	Numbers Use Various Tochn Iques to Solve Problems I nicitiving Ratios	Represent Propertional Relationships by Equations and Graphs	Number Line Solve Pip blems Involving Proportion al Relationships
9. Statistics and Probability							Discuss Statistical Questions Involving Variability in Data	Discust Statistical Questions Involving Center, Spread and Overall Shape	Discuss the Measure of Center and Variation for a Numerical Data Set	r Display Numerical Data in Plos on a Number Line: Dot Plots, Histograms, Box Plots	Relate Measures of Center and Variability to Data Distribution and Context	Draw informal Comparative Inforences About Two Populations	Find or Approximate the Probability of Smiple & Compound Bients with Variou Techniques	Construct and interpret Scatter Rots from Two Way Tables and Vice Vecta
											Summariae and Describe Numerical Data Sets	Use Interquartile Range and MAD to Draw Comparative Interences	Use Random Sampling to Draw Inferences About a Population	Use the Equation of a Linear Model to Solve Problems
10. Functions											Dofine, Evoluate and Compare Functions	Interpret the Equation y – ma b at Defining a Linear Function	Construct a Runction to Model Linear Relationships	Describe Qualitatively or Sile to'h the Functional Relations hip Between Two Quantities



Emphasizing the Shifts in the Standards Through the Matrix

THE COLLEGE AND CAREER READINESS STANDARDS

2017-18 The Institute for the Professional Development of Adult Educators



The Key Shifts in the Standards

- 1. Focus
- 2. Coherence
- 3. Rigor
 - a. Conceptual Understanding
 - b. Procedural Fluency
 - c. Application

College and Career Readiness Standards for Adult Education

CCRS

Susan Pimentel 2013



MPR



Focus

Focusing strongly where the standards focus

Instructors need to:

- narrow significantly and to deepen the manner in which they teach mathematics
- focus deeply on the major work of each level
- select priority content which addresses clear understanding

College and Career Readiness Standards for Adult Education

CCRS

Susan Pimentel 2013



MPF



Show and explain the importance of learning place value and how it they change as different operations are performed on 2- and 3-digit numbers.

Domain	NRS L	evel 1	NRS Level 2						
	Place Value of 2-Digit Numbers	Add and Subtract 2-Digit Numbers	Place Value of 3-Digit Numbers	Add and Subtract 3-Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic			
1. Number and Operations: Base Ten	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers By 2-Digit Multiples of 10	Mentally Add and Subtract 10 or 100 to 3-Digit Numbers			
	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equations			
2. Operations and Algebraic Thinking	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division within 100			
	п								





Coherence

Designing learning around coherent progressions level to level

Instructors need to:

- create coherent progressions in the content within and across levels
- establish strong conceptual understanding of core content
- use standards at higher levels as extensions of previous learning rather than signaling a new concept or idea

College and Career Readiness Standards for Adult Education

Susan Pimentel 2013





Use the concept of place value to establish the concept of addition and subtraction, leading to the understanding of expression and equations, ultimately leading to the understanding of functions.

Domain	NRS L	evel 1		NRS	Level 2	
	Place Value of 2-Digit Numbers	Add and Subtract 2-Digit Numbers	Place Value of 3-Digit Numbers	Add and Subtract 3-Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic
1. Number and Operatior Base Ten	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers By 2-Digit Multiples of 10	Mentally Add and Subtract 10 or 100 to 3-Digit Numbers
	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equations
2. Operations and Algebraic Thinking	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division within 100









Rigor

Pursuing conceptual understanding, procedural skill and fluency, and application—all with equal intensity

Instructors need to:

- focus equally on conceptual understanding of key concepts, procedural skill and fluency, and rigorous application of mathematics in real-world contexts.
- teach more than "how to get the answer"
- employ concepts from several perspectives

College and Career Readiness Standards for Adult Education

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Conceptual Understanding

Domain	NRS Level 1		NRS Le	evel 2			NRS L	evel 3			NRS Level 4			
				Neared:Tension Hundredo	Refform Multi-Digit Anthmetic	/alue	in Names and Expanded Form	Digit Nom bers	Depinals					
. Number and	Expresive 3-Dig s/kumbers Mode: Addition and Sottraction of 2-Digit/Numbers	Compare 3-Digit Numbers (Voce) Ad. B-Digit Nu	ddition and Subtraction of lumbers	Mutpy 1-Dgh Number Sy1-Dgit Mutper of 10	Ne na Ny Add and Subtract 30 or 300 to 5-Digit Numbers	Compare Any Multi-Digit Number	Round Mult-Ogic Numbers & Any Place Value	Divide 4-Digit Numbers by 1-Digit Numbers	Read, Write, and Compare Decimal on Thousandths					
perations: Base Ten						Ease Operations with Multi-Digit Numbers in Danished Alconthin	Perform Sasic Operations on Desire al Numbers Usine Multiple	Round Decimalists Any Pace	Divide 4-Digit Numbers by 3-Digit Numbers Usive Multiple Strategies					
							formiges							
. Operations and deebraic Thinking	Commutative and Associative Solving Addition and Subtraction Property of Addition Countiens	Commutative and Associative Solve Mult Property of Multiplication Equations	ultiplication and Division I Is	Distributive Property of Multiplication	Nodel Multiplication and Division within 200	Dieck Answers Long Mental Computation and Estimation	Solve Problems Involving Multiplicative Comparisons	Find All Factor Pairs of Any 2-Dgit Whole Number	Prime and Composite Numbers within 100					
a post are training						Write and Interpret Numerical Expressions	Interpret Expressions without Evaluating Them	Generate and Analyze Numericand Geometric Patterns	dentify inexplicit features of a Pattern from a Rule					
	Categories of Data Iteration	Graphs and Bar Graphs		Standard Units	Volume and Mass	Volume, Mass and Money Including	Volume, Mass and Money Including	Information Presented in Line Plots	·····					
2 Moocuromont and		Represent Whole Number Lengths Measurin	ing and Estimating Areas of	Solve Problems Involving Perimeter	Use Areas to Model Addition and	Fractions Apply Area and Perimeter Formulas	Decimals Convert Measurements within a	Organize Unit Fraction Data (1/2,	Understand Concepts of Angle					
Data		on a Number Line Plane Fig	gures	of Polygons	Multiplication	for Rectangles	System	1/4, 1/8) in a Line Plot	Measurement					
						Measure and Sketch Angles in Whole-Number Degrees	Solve Addition and Subtraction Problems for Unknown Angles							
	Analyze, Compare, and Compose 3- 2- and 3-Dimensional Composite Dimensional Shapes Shapes	Analyze, Draw and Compare Shapes Identify C Having Specified Attributes Dimensio	Common Polygons and 3- ional Figures	Categorize Shapes with Common Attributes	Partition Shapes into Parts with Equal Areas	Draw and Identify Points, Lines, Lines, Segments, and Rays	Solve Problems by Graphing Points on the Coordinate Plane	Solve Problems Involving Area, Surface Area, and Volume	Draw Polygons in a Coordinate Plan	e Solve Problems Involving Scale Drawings of Geometric Figures	Produce Congruence and Similarit Using Models	Angle Sum and Exterior Angles of Triangles and Transversals		
4. Geometry						Draw and Identify Angles, Perpendicular and Parallel Lines	Classify 2-Dimensional Figures into Categories Based on Properties	Find Areas of Polygons by Composing or Decomposing	Find the Length of a Side with the Same First or Second Coordinate	Solve Problems Involving Angle Meas., Areas, SA and Volume	Recognize Congruence and Similarit from Transformations	Explain and Apply the Pythagorean Theorem		
						epresent 3-Dimensional Figures	Use Nets to Find the Surface Area of							
		Represent Fractions with Recognize Denominators 2, 3, 4, 6, or 8 on a Number L	ze Equivalent Fractions on a	Use Visual Models to Represent Equivalent Fractions	Compare Fractions with the Same	Generate Equivalent Fractions	Compare Fractions Using Common Numerators or Denominators	Decompose Fractions as Sum of Fractions with the same	Decompose Fractions as Multiples of Unit Fractions					
E Number and		Number Line		•		Use Models to Illustrate Equivalent	Compare Fractions Using Benchmar	Denominator Add and Subtract Mixed Numbers	Multiply Fractions by a Whole					
Operations: Fractions						Fractions	Fractions Such as 1/2	Using Equivalent Fractions	Number				1	
						Multiply and Divide Fractions	Solve Problems Involving Multiplication and Division of Fractions	Convert Fractions with Denominators 10 or 100 to Decimal	Solve Problems Involving Addition and Subtraction of Fractions					
						xpressions with Expansions	Rigebraic Expressions	Equation or Inequality is True	Origendent Variable of the Another Quantity	Linear Expressions	to Solve Problems	Dere we found ant Expensions	in Scientific Natution	
6. Expressions and						enform the Onder of Operations on Igebraic Expressions	Reason and Solve One-Variable Equations and Integratinies	Use Variableis to Represent Two Related Quantities in a Briddem	Use Graphs, Tables and Equations, b. Snow Variable Relationships	Rewrite Expressions to Show Relationships Between Quantities	Solve Problems Using Algebraic Equations: With Rational Coefficients	Evaluate Square and Cube Roots of Perfect Squares and Cubes	Graph Proportional Relationships + Unit Ram acthe Slope	
Equations										Solve Simultavectus Linear Equation	2			
										in une variable				
							Divide Multi-Digit Decimals	Two Numbers ≤ 100	Generate Equivalent Expressions	in Real-World Contexts	Numbers on a Coordinate Plane	Inequality Using a Number Line	Using a Number Line	
7. The Number System						Find the Least Common Multiple of Two Numbers≤12	Use Models to Illustrate, Interpret and Compute Quotients of Fractions	Solve Problems Involving Division of s Fractions by Fractions		Plot/Find Rational Numbers on a Number Line	Understand and Evaluate Absolute Value of Rational Numbers	Solve Problems by Graphing	Multiply and Divide Rational Numbers	
									I	Convert a Rational Number to Decimal	Solve Problems Involving Basic Operations on Rational Numbers	Find Rational Approximations of Irrational Numbers	Estimate the Location of Irrational Numbers on a Number Line	
8. Ratios and						азына а применение исклоси	W77				a post name par doming box to come		porte crossensarroomg ;	
Proportional						An dia notes pariga pareo.				NOTICE SEDUED, WITH D. V	Process monthly Notes	Graphs	r soper somer netwoorsteps	
inclucionships						Involving Variability in Data	Involving Center, Spread and Overal	II Variation for a Numerical Data Set	Number Line: Dot Plots, Histograms, Box Plots	Variability to Data Distribution and	Inferences About Two Populations	of Simple & Compound Events with Various Techniques	from Two-Way Tables and Vice Vers	
9. Statistics and Probability										Formation and Pressilie M	L Una laterary settile Descent at 1997	Line Danadam Compilian in C	Unable Provider of a Line	
riobability										summarize and Describe Numerica Data Sets	Use interquartile Range and MAD b Draw Comparative Inferences	Use Handom Sampling to Draw Inferences About a Population	use the Equation of a Linear Model to Solve Problems	
10 Eurotions										t fire, Evaluate and Compare unctions	Interpret the Equation y wrow + b as Defining a Linear function	Construct a Function to Model Linear Relationships	Describe Qualitatively or Sketch the Functional Relationship Between Two Quantities	





Procedural Fluency

Domain	NRS	Level 1		NRS	Level 2			NRS I	evel 3			NRS Level 4		
					Nearest7ens.orHundreds	Perform Multi-Digit Anthresic	Value	In Names and Expanded Form	Digit Numberis	Decreta				
1. Number and	mpane 2-DigitNumbers	Vodel Addition and Subtraction of Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of S-Digit Numbers	Multiply 1-Ogit Numbers by 2-Dig Multiples of 10	t Vensily Add and Subtract 10 or 10 to 3-Digit Numbers	OCompare Any Multi-Digit Number	Round Multi-Digit Numbers to Any Place Value	Divide 4-Dig t Numbers by 2-Dig t Numbers	Read, Write, and Compare Depimal to Thousandthe				
Operations: Base Ten							Easte Olge rations with Wult-Digs Jumbers In Stantiand Algorithm	Perform Zabic Diperations on Desiri al Numbers Using Multiple	Round Decimalistic Rity Flate	Dinde 4-Digit Numbers by 3-Digit Numbers Long Multiple Strategies				
								prigtrgies						
	mmutative and Associative	Solvine Addition and Subtraction	Commutative and Associative	Solve Multiplication and Division	Distributive Procenty of	Model Multiplication and Division	Check Answers Using Mental	Solve Problems I evolvine	Find All Factor Pairs of Any 2-Dinit	Prime and Composite Numbers				
2. Operations and Algebraic Thinking	operty of Addition	Equations	Property of Multiplication	Equations	Multiplication	within 200	Computation and Estimation	Multiplicative Comparisons	Whole Number	within 100				
							Write and Interpret Numerical Expressions	Interpret Expressions without Evaluating Them	Generate and Analyze Numeric and Geometric Patterns	Identify Inexplicit Features of a Pattern from a Rule				
	organize, represent, and interpret Categories of Data	Iteration	Graphs and Bar Graphs	Privilyze and Generate Line Plots	Measure and Escimate bengths in Standard Units	Volume and Mass	Volume, Mass and Money Including Fractions	Some Problems in Lengert, Time, Volume, Mass and Money Includin Decimals	information Presented in Line Plot	Necugnize Angres				
3. Measurement and			Represent Whole Number Lengths on a Number Line	Measuring and Estimating Areas of Plane Figures	Solve Problems Involving Perimete of Polygons	er Use Areas to Model Addition and Multiplication	Apply Area and Perimeter Formula: for Rectangles	Convert Measurements within a System	Organize Unit Fraction Data (1/2, 1/4, 1/8) in a Line Plot	Understand Concepts of Angle Measurement				
Data							Measure and Sketch Angles in Whole-Number Degrees	Solve Addition and Subtraction Problems for Unknown Angles						
	Analyze, Compare, and Compose 3 Dimensional Shapes	8- 2- and 3-Dimensional Composite Shapes	Analyze, Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons and 3- Dimensional Figures	Categorize Shapes with Common Attributes	Partition Shapes into Parts with Equal Areas	Draw and Identify Points, Lines, Lines, Lines, Segments, and Rays	e Solve Problems by Graphing Point on the Coordinate Plane	s Solve Problems Involving Area, Surface Area, and Volume	Draw Polygons in a Coordinate Plan	e Solve Problems Involving Scale Drawings of Geometric Figures	Produce Congruence and Similarit Using Models	Angle Sum and Exterior Angles of Triangles and Transversals	
4. Geometry							Draw and Identify Angles, Perpendicular and Parallel Lines	Classify 2-Dimensional Figures inte Categories Based on Properties	Find Areas of Polygons by Composing or Decomposing	Find the Length of a Side with the Same First or Second Coordinate	Solve Problems Involving Angle Meas., Areas, SA and Volume	Recognize Congruence and Similarit from Transformations	Explain and Apply the Pythagorean Theorem	
							epresent 3-Dimensional Figures	Use Nets to Find the Surface Area of						
			Denominators 1.3.4.6 or 8 on a	vumber Line	Boulve ent Fractions	Numerator or Denominator	ang wes	Kurnerators or Denominators	fractions with the same	Unit Fractions				
5. Number and							Use Models to Mustrate Equivalent	Compare Fractions Using Senchmar Practices Such as 1/2	k Add and Subtract Mixed Numbers	Mütipi / Factors bya Whole				e
Operations: Fractions							Visitely and Divide Practices	Solie Propierits involving	Convert Fractions with	Sove Problems Involving Addition				1
								Multiplication and Division of Fractions	Denominators 10 or 100 to Decimals	and Subtraction of Fractions		i		
							Expressions with Exponents	Algebraic Expressions	Equation or Inequality is True	Dependent Variable of the Another Quantity	Linear Expressions	to Solve Problems	Generate Equivalent Expressions	In Scientific Notation
6. Expressions and Equations							erform the Order of Operations on Igebraic Expressions	eason and Solve One-Variable Equations and Inequalities	Use Variables to Represent Two Related Quantities in a Problem	Use Graphs, Tables and Equations to Show Variable Relationships	Rewrite Expressions to Show Relationships Between Quantities	Solve Problems Using Algebraic Equations with Rational Coefficients	Evaluate Square and Cube Roots of Perfect Squares and Cubes	Graph Proportional Relationships - Unit Rate as the Slope
1									-		iolve Simultaneous Linear Equations n One Variable	5		
							Flaently Dwide Multi-Dgit Numbers	Fluently Add. Subtract, Mutiply an Divide Multi-Digit Decimals	d Find the Greatest Common Factor of Two Numbers's 100	Apply Datributive Property to Generate Equivalent Expressions	Um Integensto Represent Quantities In Real-World Contexts	Plot/find Ordered Pairs of Rational Numberson a Coordinate Plane	Explain Statements of Order and Inequality Using a Rumber Line	Ned and Subtract Rational Number: Usinga Number Line
							Find the Least Common Multiple of Two Numbers 12	Use Models to Illustrate, interpret and Compute Quotients of Practice	Solve Problems Involving Division of a Practions by Fractions		Rot/Find Rational Numberson a Number Line	Understand and Evaluate Absolute Value of Rational Numbers	Solve Problems by Graphing	Multiply and Divide Rational Numbers
7. The Number System											Convert à Rational Number to	Solve Problems Involving Basic	Find Rational Approximations of	Estimate the Location of Instional
											Decima-	operations on kational numbers	errasional numbers	Wimpersion 2 Wimper Line
8. Ratios and Proportional							Two Quantities Using a Ratio				with the Ratio a:b, with b ≠ 0	Problems Involving Ratios	Relationships by Equations and Graphs	Proportional Relationships
Relationships							Discuss Statistical Questions Involving Variability in Data	Discuss Statistical Questions Involving Center, Spread and Overa	Discuss the Measure of Center and III Variation for a Numerical Data Set	Display Numerical Data in Plots on a Number Line: Dot Plots, Histograms	Relate Measures of Center and Variability to Data Distribution and	Draw Informal Comparative Inferences About Two Populations	Find or Approximate the Probability of Simple & Compound Events with	Construct and Interpret Scatter Plot from Two-Way Tables and Vice Vers
9. Statistics and Probability								snape		BOX PIOLS	Context	Line internet in Deserved MAD	Various rechniques	Heather Frankling of a Lingue Model
											Data Sets	Draw Comparative Inferences	Inferences About a Population	to Solve Problems
10. Functions											Define, Evaluate and Compare Functions	Interpret the Equation y = mx + b as Defining a Linear Function	Construct a Function to Model Linear Relationships	Describe Qualitatively or Sketch the Functional Relationship Between Two Quantities





Application of Mathematics

Domain	NRS L	evel 1		NRS L	evel 2			NRS L	evel 3			NRS Level 4		
	Place Value of 2-Digit Numbers	Add and Subtract 2-Digit Numbers	Place Value of 3-Digit Numbers	Add and Subtract 3-Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic	Generalize Understanding of Place Value	Read and Write Multi-Digit Numbe in Names and Expanded Form	rs Multiply 4-Digit Numbers by 1- to 2 Digit Numbers	Use Place Value to Understand Decimals				
1. Number and	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers By 2-Digi Multiples of 10	it Mentally Add and Subtract 10 or 10 to 3-Digit Numbers	O Compare Any Multi-Digit Number	Round Multi-Digit Numbers to Any Place Value	Divide 4-Digit Numbers by 1-Digit Numbers	Read, Write, and Compare Decima to Thousandths				
Operations: Base Ten							Basic Operations with Multi-Digit	Perform Basic Operations on	Round Decimals to Any Place	Divide 4-Digit Numbers by 2-Digit				
							Numbers in Standard Algorithm	Decimal Numbers Using Multiple Strategies		Numbers Using Multiple Strategies				
	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equation:	Solve Multi-Step Problems Using Basic Operations	Interpret Multiplication as Comparison Statements	Interpret the Remainder in Probler	s Multiples of 1-Digit Numbers Up to 100				
2. Operations and	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division within 100	Check Answers Using Mental Computation and Estimation	Solve Problems Involving Multiplicative Comparisons	Find All Factor Pairs of Any 2-Digit Whole Number	Prime and Composite Numbers within 100				
Algebraic Thinking							Write and Interpret Numerical	Interpret Expressions without	Generate and Analyze Numeric and	Identify Inexplicit Features of a				
	Ponine Reportment and Internet 3	Internet Manual Investor Streets	Banking and Gargente Director	Antiles and Gamerata Line Date	Rearing and Fridmate Leasther in	Reve Brobarry Incluing Time	Edia Problem in Length Time	Folg Problems in Length Time	Collection Participa	Parcerdon Montan				
	tegories of Data	teration	Braphs and Bar Graphs		Standard Units	Volume and Mass	Volume: Mass and Money including Practions	Volume, Massand Money Including Decimala	Information Presented in Line Plots	and the states				
3. Measurement and			Represent Whole Number Lengths on a Number Line	Measuring and Estimating Areas of Plane Figures	Solve Problems involving Perimeter of Polygons	Use Areasto Model Addition and Multiplication	Apply Area and Perimeter Formulas for Rectangles	Convert Messurements within a System	Drganize Unit Fraction Data (1/2) 1/4, 1/8) in a Unit Plot	Understand Concepts of Angle Measurement				
Data						<u>.</u>	Veasure and Sketch Angles in Whole-Number: Destees	Solve Addition and Subtraction Problemsfor Unknown Angles						
	salver Compare and Compare S-	P-and 8-Dimensional Commoste	Brailve, Draw and Compare Shares	dentify Common Polyeous and 3-	Convention Shares with Common	Partition Shanks into Parts with	Drawand identify Rivers Lines: Line	Kelve Problemsky Grankine Points	Rolys Prohlems Involving Area	Draw Polymons in a Count party Plane	Knive Brithlems Involvine State	Produce Cooks which and Similarity	Anele Sum and Puterin's Aneles of	
	mensional Shapes	Shapes	tiaving Specified Attributes	Dimensional Figures	Attributes	Equal Areas	segments, and Rays	on the Coordinate Plane	Surface Area, and Volume		Drawings of Geometric Figures	Using Model s	Triangles and Transversal s	
4. Geometry							Draw and Identify Angles Perpendicular and Parallel Lines	Classify 2-Dimensional Figures into Categories Based on Properties	Find Areas of Polygons by Composing or Decomposing	Find the Length of a Side with the Same First or Second Coordinate	Solve Problems Involving Angle Vjeks, Areas, SA and Volume	Recognize Congruence and Similarit from Transformations	Explain and Apply the Pythagorean Theorem	
							Represent 3-Dimensional Figures Usine Nets	Use Nets to Find the Surface Area of Figures			•			1
			Represent Fractions with Denominators 2, 3, 4, 6, or 8 on a Number Line	Recognize Equivalent Fractions on a Number Line	Use Visual Models to Represent Equivalent Fractions	Compare Fractions with the Same Numerator or Denominator	Generate Equivalent Fractions	Compare Fractions Using Common Numerators or Denominators	Decompose Fractions as Sum of Fractions with the same Denominator	Decompose Fractions as Multiples Unit Fractions	1			
5. Number and							Use Models to Illustrate Equivalent Fractions	Compare Fractions Using Benchman Fractions Such as 1/2	Add and Subtract Mixed Numbers Using Equivalent Fractions	Multiply Fractions by a Whole Number				1
Operations: Fractions							Multiply and Divide Fractions	Solve Problems Involving Multiplication and Division of	Convert Fractions with Denominators 10 or 100 to Decima	Solve Problems Involving Addition and Subtraction of Fractions				1
								Fractions				•		
							нарежила или мрижина	la Boltan adversaria.	Monthly of Lotherst Street	ренетиент, ум. жиле из ме млинен. Оснатову	enzer eduzannin	In mole sublicity	ing ing war internal gain fraits growing	I. S. E. I. I. S. HARRING
6. Expressions and Equations							Perform the Order of Operations of Algebraic Expressions	Reason and Solve Dire-Variable Equations and inequalisies	use Variables to Represent Two Reliated Quantities in a Problem	Use Graphs, Tames and Eduardons to Drips: Variable Reliationships	Rewrite Expressions to Show Rewriterahips Sertween Quandries	Sove Problems Dong Algeoraic Ecuations with Rational Coefficients	Evaluate Square and Dute Roots of Ferfect Squares and Dutes	Graph Proportional Relationships - Unit Rate as the Sope
											50 ye Simultanenus Linear Equation In One Variable	4		
								Divide Multi-Digit Decimals	Two Numbers \$ 100	Generate Equivalent Expressions	In Real-World Contexts	Numbers on a Coordinate Plane	Inequality Using a Number Line	Using a Number Line
7. The Number System							Find the Least Common Multiple of Two Numbers ≤ 12	Use Models to Illustrate, Interpret and Compute Quotients of Fraction:	Solve Problems Involving Division o s Fractions by Fractions		Plot/Find Rational Numbers on a Number Line	Understand and Evaluate Absolute Value of Rational Numbers	Solve Problems by Graphing	Multiply and Divide Rational Numbers
										1	Convert a Rational Number to Decimal	Solve Problems Involving Basic Operations on Rational Numbers	Find Rational Approximations of Irrational Numbers	Estimate the Location of Irrational Numbers on a Number Line
8. Ratios and				_										
Proportional							no Quantites caloga catio				WITH THE ASSOS IS, WITH BE D	-rooming levidying katilos	Graphs	Proportione i ve atonen pe
Relationships							woving Variability in Data	Involving Center, Spread and Overall	Variation for a Numerical Data Set	Number Line: Dos Plots, Histograms,	Variability to Data Distribution and	references About Two Populations	of Simple & Compound Events with	From Two-Way Tables and Nor Versa
9. Statistics and								Shape		Box Rats	Context		Various Techniques	
Probability											Sum marize and Describe Numerical Data Sets	Use interquartile Range and MAD to Draw. Comparative inferences	Use Random Sampling to Draw oferences About a Population	Use the Equation of a Linear Model to Solve Problems
10. Functions											Define, Evaluate and Compare Functions	Interpret the Equation y = mx + b as Defining a Linear Function	Construct a Function to Model Linear Relationships	Describe Qualitatively or Sketch the Functional Relationship Between Two Quantities







The Starting Point of the ABE Math Curriculum Matrix

THE CURRICULUM FRAMEWORKS

2017-18 The Institute for the Professional Development of Adult Educators

Question



POLL: How much time have you spent reviewing the ABE Mathematics Curriculum Frameworks?

Effective July, 2018	Very Much	Program Sa
Florida Department of Education Adult General Education Curriculum Framework	Considerable	ABE is a non-structure Effective fully, 2018 and family members. A student encoded in the scenes of the following course: Mathemanolical in the scenes
	Little	This program is divided linto levels that are reported as student educational gains: En Functioning Cerebic (EFL) for Verils that are reported as student educational gains: En Gal-6014, FAC, I levels that are reported as student educational gains: En Gal-6014, FAC, I levels must be an anyonting and ji literacy Complexity and gains: En demonstrating uses the teachery: answer of the report of the teachery.
ogram Title 990000 rogram Number Adult Bavic Education Mathematics Surse Title School Districts: 9900001 Course Number Ichoida College System: ADX0100.ABX0199 Course Number	None at all	eventsmark skills to demonstrate prolificiency in a standard. Pogran Lengtha Progran Lengtha In the following table illustra-
CIP Number 153301070V Grade Faylvalett: 0.0.8.9 Grade Evel 30, 31 		students visitood, how services the (econominded maximum number of instructional basis for much should be a student learns at his or her individual basis, or up finger should be a student basis for much should be a structure of the structure of
Purpose Purpose The Adult Basic Education (ABE) Program includes content standards that describe when "" the Adult Basic Education (ABE) Program includes content standards that describe when "" throw and be able to the in Mathematics, tanguage Arts (tanguage, speaking and literaling, and writing), and Reading. The content standards serve serveral purpose: and Reading. The content standards there be development		Autorement proceedings and a taxes means former, physion of faireer and individuations and a state of the state of th
 Provide a 20minum with ABE curricipuits Assist programs with ABE curricipuits Provide Buildance for new ABE instructors Provide Buildance for new ABE instruction Ensure Quality instruction through professional development. Provide bails' salits instruction (N.O. B.S.) and critical trinking skills to prepare students for GED preparation (9.0 – 12.9), postsecondary education, and employment. preparation (9.0 – 12.9), postsecondary education, and modelings and also to assist programs and preparation (9.0 – 12.9), postsecondary education, and modelings and also to express equipment. 	Spa	Mathematics - ABE Level 1 wo (2) 450 Hours 1 Mathematics - ABE Level 1 wo (2) 450 Hours 1 Mathematics - ABE Level 1 wo (2) 450 Hours 1 Mathematics - ABE Level 1 move (3) 300 Hours 2 Mathematics - ABE Level 7 move (3) 300 Hours (2,0,3,0)
The content standards should be used and appropriate instructional instruction and the second standards should be used and the second standards do not be used and standards do not be used and standards should have so that teachers can build the best figure out the knowledge and skills their student's should have so that teachers can build the best figure out the knowledge and skills their student's should have so that teachers can build the best figure out the knowledge and skills their student's should have so that teachers can build the best figure out the knowledge and skills their student's should have so that teachers can build the best figure out the knowledge and skills their student's should have so that teachers can build the best figure out the knowledge and skills their student's should have so that teachers can build the best figure out the knowledge and skills their student's should have so that teachers can build the best figure out the knowledge and skills their student's should have so that teachers can build the best figure out the knowledge and skills their student's should have so that teachers can build the best figure out the knowledge and skills their student's should have so that teachers can build the best figure out the knowledge and skills their student's should have so that teachers can build the best figure out the knowledge and skills their student's should have so that teachers and skills their student's should be should b	7he head SPeci stand Wisstra	inathematic standards are separated into ten strands as shown in the characteristic standards are separated into ten strands as shown in the characteristic standard corresponds to the sandards ison
The ABE content standards have been true of the ABE programmed and the secondary incom- standards. The integration of CCR standards into ABE programmed and the secondary incom- knowledge and skills that students will need to transition to adult secondary incom- continuing on to postsecondary education.	numbe	me specific level appropriate expectations and skill standards across all levels of learning. Each strand is and specific level appropriate expectations skills has a corresponding twords, each anchor ing used to indicate strands, anchor standards, and skill standards. In the table below illustrates that and the standards and skill standards.
11Page		
		21Page



The ABE Mathematics Curriculum Frameworks

Effective July, 2018

Florida Department of Education Adult General Education Curriculum Framework Adult Basic Education (ABE) 9900000 Adult Basic Education-Mather School Districts: 9900001 Florida College System: ABX0100-ABX0 ourse Title ourse Number

1532010200 CIP Number 0.0-8.9 Grade Equivalent Varies (See Program Lengths Section) 30, 31 Grade Level The Adult Basic Education (ABE) Program includes content standards that describe what students should from and be able to do in Mothematics. Language Arts (Iongulage, speaking and Istening, and writing). Standard Length

The Adult Basic Education (ABE) Program includes content standards that describe what sudents should new and be able to do in Mathematics, Language Arts (language, speaking and listening, and writing), and Bandian The content examinant energy assess a surror of neuroscience. know and use ages to up in many many, any ange was pang and Reading. The content standards serve several purposes: Provide a common language for ABE levels among programs

- Assist programs with ABE curriculum development Provide Buildance for new ABE Instructors

 Ensure quality instruction through professional development
Provide basic skills instruction (0.0 – 0.9) and critical thinking skills to prepare students for GED ri conde table skills instruction (UV – 8.3) and crisical transing skills to preparation (9.0 – 12.9), post-secondary education, and employment. The content standards should be used as a basis for curriculum design and also to assist programs and to obtain which administration and design and association instrumentant materially instrumentional techniques and

The content standards should be used as a basis for curriculum design and also to assist programs and teachers with selecting or designing appropriate instructional materials, instructional rechniques, and ongoing gasesoment strategies. Standards do not tell teachers how to teach, but they do help teachers for one with the boundarder and state their endance should have excited teachers can build the herd ongoing assessment strategies. Standards do not tell teachers how to teach, but they do help teac figure out the knowledge and skills their students should have so that teachers can build the best

The ABE content standards have been revised to include the College and Carety Readiness (CCN) standards. The Integration of CCR standards into ABE program is intended to provide the foundation of here index and while the standards will used to transition to state commutant segmentation of the standards. The Integration of CCR standards into ABE programs is intended to provide the tournlation of knowledge and skills that students will need to transition to adult secondary programs with the goal of continuing on to nystee understand education.

unoversities and online they ordered will need continuing on to postsecondary education.

1)Page

Effective July, 2016

esigned to develop literacy skills necessary to be successful workers, citizens ent enrolled in the ABE program may be receiving instruction in one or more thematics, Language Arts, or Reading.

wels that are reported as student educational gains: Educational ideral reporting and Literacy Completion Points (LCPs) for state reporting. e measured by approved validation methods in accordance with Rule 's responsibility to decide and inform the student of the criteria for benchmark. It is not necessary for a student to master 100% of the s proficiency in a standard.

recommended maximum number of instructional hours for each level. ch student learns at his or her individual pace, and there will be e the program or attain their educational goals in lewer or more or each ABE instructional level.

al Assessment Paper, Division of Career and Adult Education, at 5423/urlt/1415acatop.pdf for both recommended and required inte

	Maximum Hours	NRS Levels
BE Level One (1)	450 Hours	1 (0.0-1.9)
3E Level Two (2)	450 Hours	2 (2.0-3.9)
E Level Three (3)	300 Hours	3 (4.0 - 5.9)
ELevel Four (4)	300 Hours	4 (6.0-8.9)

to ten strands as shown in the chart below. Each strand is or standards identical across all levels of learning. Each levelumbered CCR anchor standard. In other words, each anchor readiness skills has a corresponding level-specific standard ions call a benchmark skill. The table below illustrates the andards, and skill standards.

21Page

Effective July, 2018 Strang Program Math Area NRS MA. Anchor Level Benchr ARC tandard ari Skill aic Thinking ith 20 mm zu, addition and subtraction by counting by 2 to add or subtract by 2. audents will progress through the performance standards sequentially. The autorna smi programs na cogni oni periorinance stantaria vequentany. Inc polic centered and/or project-based lessons that integrate standards from p RUCTOR CERTIFICATION REQUIREMENTS NUMERON SEASON SEAS n requires the provision of accommodations for students with disabilities to In requires the provision of accommonations for structures with disabilities for a second sec maane vituon escens. Adams standante wird onkabilitete intest sent room leinte with disabilities may need accommodations in areas such as nerves where was an an and a second monoralisms in areas such as aterials, assignments and assessments, time demands and schedules, nate inay, assignments and assessments, time demonds and schedules, ine technology and special communication systems. Documentation of the we recontrolly and special continuous of a confidence over and provided should be maintained in a confidential file. we not standards are designed to be integrated into the ABE frameworks to nerre suenanus are occeptive in verintegratera into the Asternerver, Varation and planning. Students can access Florida's Career informa wireton and praining, structure can access method a career interna-ie system for career exploration and development of a career plan. locate, evaluate, and interpret career information. nease, consume, and incorport cancer insumition, , skills, and personal preferences that influence career and education ster and related pathways that match career and education goals.

tial in today's world. Studients user a variety of technology toots such une se invage a straine, antgenene use a variesy or uncriminage usus such patters for multiple uses; communicate with friends and family, apply puters for multiple cases; communicate which memory and intervent and intervent of the second s replant on the working and language arts standards. (Example Writing 6, and Speaking and Listening 5).

3|Page

This is a 31-page document



The ABE Mathematics Domains

	ADULT BASIC	EDUCATION N	IATHEMATIC D	OMAINS	
Domain	NRS Reporting	NRS Level 1	NRS Level 2	NRS Level 3	NRS Level 4
number	Grade Equivalent (GE)	0.0 - 1.9	2.0 - 3.9	4.0 - 5.9	6.0 - 8.9
1	Number and Operations: Base Ten	0.0 – 1.9	2.0 – 3.9	4.0 – 5.9	
2	Operations and Algebraic Thinking	0.0 – 1.9	2.0 – 3.9	4.0 – 5.9	
3	Measurement and Data	0.0 – 1.9	2.0 - 3.9	4.0 - 5.9	
4	Geometry	0.0 – 1.9	2.0 - 3.9	4.0 – 5.9	6.0 - 8.9
5	Number and Operations: Fractions		*3.0 – 3.9	4.0 - 5.9	
6	Expressions and Equations			4.0 – 5.9	6.0 - 8.9
7	The Number System			4.0 – 5.9	6.0 - 8.9
8	Ratios and Proportional Relationships			4.0 – 5.9	6.0 - 8.9
9	Statistics and Probability			4.0 - 5.9	6.0 - 8.9
10	Functions				*7.0 - 8.9



Number of Standards

	ADULT BASIC EDUCATION MATHEMATIC DOMAINS										
Domain Number	NRS Reporting Grade Equivalent (GE)	NRS Level 1 0.0 – 1.9	NRS Level 2 2.0 – 3.9	NRS Level 3 4.0 – 5.9	NRS Level 4 6.0 – 8.9						
1	Number and Operations: Base Ten	S =	5	S = 4							
2	Operations and Algebraic Thinking	S =	10	S = 4							
3	Measurement and Data	S =	8	S = 5							
4	Geometry	S =	: 4	S = 8							
5	Number and Operations: Fractions		S = 2	S = 5							
6	Expressions and Equations			S =	= 8						
7	The Number System			S =	= 5						
8	Ratios and Proportional Relationships			S =	= 3						
9	Statistics and Probability			S =	= 6						
10	Functions				S = 2						

A total of 79 standards are contained in the Curriculum Frameworks.



Number of Benchmarks

ADULT BASIC EDUCATION MATHEMATIC DOMAINS										
Domain	NRS Reporting	NRS Level 1	NRS Level 2	NRS Level 3	NRS Level 4					
Number	Grade Equivalent (GE)	0.0 – 1.9 2.0 – 3.9		4.0 – 5.9	6.0 - 8.9					
1	Number and Operations:	B =	19	B = 15						
	Base Ten									
2	Operations and	B =	21	B = 11						
	Algebraic Thinking									
3	Measurement and Data	B =	20	B = 14						
4	Geometry	B =	= 9	B = 18						
5	Number and Operations:		B = 4	B = 14						
	Fractions									
6	Expressions and			B =	= 24					
	Equations				- Carlos -					
7	The Number System			B =	= 16					
8	Ratios and Proportional			B	= 6					
	Relationships									
9	Statistics and Probability			B =	= 20					
10	Functions				B = 4					

A total of 294 benchmarks are contained in the Curriculum Frameworks.



Domain	NRS	Level 1		NRS I	Level 2			NRS L	evel 3		NRS Level 4			
	Place Value of 2-Digit Numbers	Add and Subtract 2-Digit Numbers	Place Value of 3-Digit Numbers	Add and Subtract 3-Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic	Generalize Understanding of Place Value	Read and Write Multi-Digit Number in Names and Expanded Form	Multiply 4-Digit Numbers by 1- to Digit Numbers	2 Use Place Value to Understand Decimals				
1. Number and	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Number	Compare 3-Digit Numbers	Model Addition and Subtraction of 2-Digit Number	f Multiply 1-Digit Numbers By 2-Digi	It Mentally Add and Subtract 10 or 10	O Compare Any Multi-Digit Number	Round Multi-Digit Numbers to Any	Divide 4-Digit Numbers by 1-Digit	Read, Write, and Compare Decimal				
Operations: Base Ten		2 coge realizer 2		3-bige numbers	multiples of 10	to 5-bigit realities a		Finde value		to modelland				
							Basic Operations with Multi-Digit Numbers in Standard Algorithm	Decimal Numbers Using Multiple Strategies	Round Decimais to Any Place	Numbers Using Multiple Strategies				
	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equation:	Solve Multi-Step Problems Using Basic Operations	Interpret Multiplication as Comparison Statements	Interpret the Remainder in Proble	ms Multiples of 1-Digit Numbers Up to 100				
2 Operations and	Commutative and Associative	Solving Addition and Subtraction	Commutative and Associative	Solve Multiplication and Division	Distributive Property of	Model Multiplication and Division	Check Answers Using Mental	Solve Problems Involving	Find All Factor Pairs of Any 2-Digit	Prime and Composite Numbers				
Algebraic Thinking	Property of Addition	Equations	Property of Multiplication	Equations	Multiplication	within 100	Computation and Estimation	Multiplicative Comparisons	Whole Number	within 100				
							Write and Interpret Numerical Expressions	Interpret Expressions without Evaluating Them	Generate and Analyze Numeric an Geometric Patterns	d Identify Inexplicit Features of a Pattern from a Rule				
_	Organize, Represent, and Interpret	3 Indirectly Measure Lengths through	h Analyze and Generate Picture phs and Barraphs	Analyze and Generate Line Plots	Measure and Estimate Lengths in Units	Solve Problems Involving Time, Volume Mass	Solve Problems in Length, Time, Volume, Mass and Money Includin	Solve Problems in Length, Time, Volume, Massar Monrae Iudin	Solve Problems Involving Information Presented in the Plo	Recognize Angles ts				
3. Measurement and	ne /	ABE	Represent Wille Liver ng	Sur and simal Areas of	olve Problem wolv Persiete	r e Ares o N el Additio and	App Area ad Po nets form	s C vert Meason Willin a	iniz nit F tion D (1/2)	Understand C. Sof. de	mm	nar i:	zes	
Data							Meaning and Skatch Appler in	Solve Addition and Subtraction						
							Whole-Number Degrees	Problems for Unknown Angles						
	Analyze, Compare, and Corrose 3 Dimensional Shapes	Bhap Dimensite Composit	Anaber rav id Co sar hap ing cif Attr tes	e dentity mo plygo and 3 bir and Fig s	Consiste Shapes with Consist Attriue	Part of pesil Parts with Equi re	sraw. fy fats nes, Lin segments at sa	e re Protection of the contract of the Contract of the Protection of the Protection of the Protection of the Contract of the Protection of	Sol Problems plvin rea Sul te Area, an folun	aw Fingons in produce Pla	e Provinsi Involving Sca A Llings of Gale Patric Figure	rodi Co uen and Si art Jsing ode	Angle Sum and Exterior Angles of Triangles and Transversals	
4 Goometry							Draw and Identify Angles,	Classify 2-Dimensional Figures into	Find Areas of Polygons by	Find the Length of a Side with the	Solve Problems Involving Angle	Recognize Congruence and Similarit	y Explain and Apply the Pythagorean	-
4. Geometry						T		Categories Based on Properties	composing or becomposing	Same Prist of Second Coordinate	Meas., Areas, SA and Volume	nommansionacions	mediem]
			Description with	Descenter Freeholist Freeholist	10.5			igu	S	Deserves and Freebland on Multiplan				
			Denominators 2, 3, 4, 6, or 8 on a Number Line	Number Line	Equivalent Fractions	Numerator or Denominato		Numerators or Denominators	Fractions with the same Denominator	Unit Fractions				
5. Number and							Use Models to Illustrate Equivalent Fractions	Compare Fractions Using Benchmar Fractions Such as 1/2	Add and Subtract Mixed Numbers Using Equivalent Fractions	Multiply Fractions by a Whole Number				
Operations: Fractions							Multiply and Divide Fractions	Solve Problems Involving Multiplication and Duking of	Convert Fractions with	Solve Problems Involving Addition				
							Nelsonal Poplasta Alexicata	Fractions	Han Coloritation to Determine life	European One Countril to a the	Add Fubbrack Factor and Furnad		And the Description of Fernanda	Colum Dan Marrier Insulation Occupation
							Expressions with Exponents	Algebraic Expressions	Equation or Inequality is True	Dependent Variable of the Another Quantity	Linear Expressions	to Solve Problems	Generate Equivalent Expressions	In Scientific Notation
6. Expressions and							erform the Order of Operations on Igebraic Expressions	leason and Solve One-Variable quations and Inequalities	Use Variables to Represent Two Related Quantities in a Problem	Jse Graphs, Tables and Equations to Show Variable Relationships	Rewrite Expressions to Show Relationships Between Quantities	Solve Problems Using Algebraic Equations with Rational Coefficients	Evaluate Square and Cube Roots of Perfect Squares and Cubes	Graph Proportional Relationships - Unit Rate as the Slope
Equations											iolve Simultaneous Linear Equation	15		
									I	1	in One variable			-
							Fluently Divide Multi-Digit Number	Fluently Add, Subtract, Multiply and Divide Multi-Digit Decimals	Find the Greatest Common Factor i Two Numbers ≤ 100	d Apply Distributive Property to Generate Equivalent Expressions	Use Integers to Represent Quantiti In Real-World Contexts	et Plot/Find Ordered Pairs of Rational Numbers on a Coordinate Plane	Explain Statements of Order and Inequality Using a Number Line	Add and Subtract Rational Numbers Using a Number Line
7 The Number System							Find the Least Common Multiple of Two Numbers ≤ 12	Use Models to Illustrate, Interpret and Compute Quotients of Fractions	Solve Problems Involving Division of Fractions by Fractions)f	Plot/Find Rational Numbers on a Number Line	Understand and Evaluate Absolute Value of Rational Numbers	Solve Problems by Graphing	Multiply and Divide Rational Numbers
7. The Number System											Convert a Rational Number to	Solve Problems Involving Basic	Find Rational Approximations of	Estimate the Location of Irrational
											Decimal	Operations on Rational Numbers	Irrational Numbers	Numbers on a Number Line
8. Ratios and Proportional							Describe a Relationship Between Two Quantities Using a Ratio				Explain the Unit Rate a/b Associate with the Ratio $a:b$, with $b \neq 0$	ed Use Various Techniques to Solve Problems Involving Ratios	Represent Proportional Relationships by Equations and Graphs	Solve Problems Involving Proportional Relationships
Relationships													1	
							Discuss Statistical Questions Involving Variability in Data	Discuss Statistical Questions Involving Center, Spread and Overal Shape	Discuss the Measure of Center and Variation for a Numerical Data Set	Display Numerical Data in Plots on a Number Line: Dot Plots, Histograms Box Plots	Relate Measures of Center and Variability to Data Distribution and Context	Draw Informal Comparative Inferences About Two Populations	Find or Approximate the Probabilit of Simple & Compound Events wit Various Techniques	Construct and Interpret Scatter Plot from Two-Way Tables and Vice Vers
9. Statistics and Probability											Summarize and Describe Numerice	Use Interguartile Range and MAD	Use Random Sampline to Draw	Use the Equation of a Linear Model
											Data Sets	Draw Comparative Inferences	Inferences About a Population	to Solve Problems
10 Eurotions											Define, Evaluate and Compare Functions	Interpret the Equation y = mx + b as Defining a Linear Function	Construct a Function to Model Linear Relationships	Describe Qualitatively or Sketch the Functional Relationship Between Two Quantities
TO. Functions												- Le		



Statistics NRS Level 3



3.1 Develop understanding of statistical variability.

- Discuss a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.
- Discuss a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.
- Discuss that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.

3.2 Summarize and describe distributions.

- a) Display numerical data in plots on a number line, including:
- Dot plots (graph of data using dots).
- Histograms (bar graph using ranges of data).
- Box plots (graph uses rectangles with lines extending from the top and bottom).







Aligning to the Assessment

TEST FOR ADULT BASIC EDUCATION (TABE) 11 & 12

2017-18 The Institute for the Professional Development of Adult Educators







ipdae

BY EDUCATORS FOR EDUCATORS

action 1/b as the quantity formed by 1 part when a whole is b equal parts; understand a fraction a/b as the quantity formed a 1/b.	Б	Medium
action as a number on the number line; represent tractions on a pram. (S.N.F.2.a, S.N.F.2.b)	B	Madium
nca of fractions in spacial cases, and compare fractions by rea- ir size: (3.NE.3.a, 3.HE.3.b, 3.HE.3.c, 3.NE.3.d)	B	High
STANDARD DESCRIPTION	AE-CCR LEVEL	TABE 11/12 EMPHASIS LEVEL
ction within 100 to solve one- and two-step word problems in- ing to taking from, putting tegether, taking apart, and compar- sositions, e.g., by using drawings and equations with a symbol a represent the problem.	B	Medium
a numbers, e.g., interpret 5 x 7 as the total number of objects tch. For example, describe a context in which a total number d as 5 x 7.	8	Modium
fients of whole numbers, e.g., interpret 56/8 as the number in 56 objects are partitioned aqually into 8 shares, or as a bjects are partitioned into equal shares of 8 objects aech, ext in which a number of shares or a number of groups can	B	Low
within 100 to solve word problems in situations involving surament quantities, e.g., by using drawings and equations number to represent the problem.	B	Low
umber is a multiplication or division equation relating i.e., determine the unknown number that makes the equa- $: 8 \times 2 = 48, 5 = [box]/3, 6 \times 6 = 2.$	в	Low
 strategies to multiply and divide. Examples: If & x 4 = 1 to known. (Commutative property of multiplication.) 3 x then 15 x 2 = 30, or by 5 x 2 = 10, then 3 x 10 = 30, i on, Knowing that 8 x 5 = 40 and 8 x 2 = 16, ane can + (8 x 2) = 40 = 16 = 50, (Distribute property.) 	B	Low
i factor problem. For example, find 32/8 by finding tiplied by 8.	B	Modium
10, using strategies such as the relationship between ing that 8 \pm 5 = 40, one knows 40/ 5 = 8) or . If Grade 3, know from memory all products of two	B	Low
 four operations, Represent these problems using unknown quantity. Assess the reasonableness of ustimation strategies including rounding. 	8	Medium
there in the addition table or multiplication t of operations. For example, observe that 4 in why 4 times a number can be decomposed	В	Low
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TABE 11/12 EMPHASIS

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D	omain	NRS	Level 1	NRS Level 2							
		Place Value of 2-Digit Numbers	Add and Subtract 2-Digit Numbers	Place Value of 3-Digit Numbers	Add and Subtract 3-Digit Numbers	Round Whole Nu the Nearest Tens Hundreds	umbers to s or	Use Properties of Operation to Perform Multi-Digit Arithmetic			
Number se Ten	and Operations:	Compare 2-Digit Numbers	Numbers By s of 10	Mentally Add and Subtract 10 or 100 to 3-Digit Number							
(9)	STANDARD		AE-CCF LEVEL	TABE 11/12 EMPHASIS LEVEL							
EN (28'	2.NBT.1	Understand that th tens, and ones; e.g ing as special case	В	Low							
i.	3.NBT.1	Use place value un	В	Medium							
AS	2.NBT.2	Count within 1000	В	Medium							
NB	3.NBT.2	Fluently add and so value, properties o	В	Low							
ION	2.NBT.3	Read and write nu ed form.	В	Low							
ERAT	3.NBT.3	Multiply one-digit 5 x 60) using strat	whole numbers by i egies based on pla	multiples of 10 in the ce value and proper	e range 10 - 90 (e. ties of operations.	.g., 9 x 80,	В	Medium			
DO	2.NBT.4	Compare two three digits, using $>$, =,	В	Medium							
R AN	2.NBT.6	Add up to four two of operations.	В	Medium							
NUMBE	2,NBT.7	Add and subtract v on place value, pro subtraction; relate tracting three-digit ones and ones; and	В	Medium							



	Represent Fractions with Denominators 2, 3, 4, 6, or 8 on a Number Line	Recognize Equivalent Fractions on a Number Line	Use Visual Models to Represent Equivalent Fractions	Compare Fractions with the Same Numerator or Denominator
5. Number and Operations: Fractions				

(%)	STANDARD	STANDARD DESCRIPTION	AE-CCR LEVEL	TABE 11/12 EMPHASIS LEVEL
OPERAT NS (12%	3.NF.1	Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b.	В	Medium
ER AND RACTIC	3.NF.2	Understand a fraction as a number on the number line; represent fractions on a number line diagram. (3.NF.2.a, 3.NF.2.b)	В	Medium
NUMBE	3.NF.3	Explain equivalence of fractions in special cases, and compare fractions by rea- soning about their size. (3.NF.3.a, 3.NF.3.b, 3.NF.3.c, 3.NF.3.d)	В	High



	Solve Ad Subtract within 20	ldition and ion Problems 0	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplicati Division Problems 100	on and s within	Multiplicati 100	on Facts within	Solve 2-Step Problems or Equations
2. Operations and Algebraic Thinking	Commut Associati Addition	ative and ive Property of	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplicati Division Equation	Solve Multiplication and Division Equations		Property of on	Model Multiplication and Division within 100
		STANDARD	S	TANDARD DESCRIPTION		AE-CCR LEVEL	TABE 11/12 EMPHASIS LEVEL		
		2.0A.1	Use addition and subtraction wit volving situations of adding to, to ing, with unknowns in all position for the unknown number to repre-	hin 100 to solve one- and two-ste aking from, putting together, takin s, e.g., by using drawings and equ esent the problem.	p word problems in- g apart, and compar- ations with a symbol	В	Medium		
		3.0A.1	Interpret products of whole numb in 5 groups of 7 objects each. Fo of objects can be expressed as	bers, e.g., interpret 5 x 7 as the to or example, describe a context in 5 x 7.	tal number of objects which a total number	В	Medium		
	1000 CT 100	3.0A.2	Interpret whole-number quotient of objects in each share when 50 number of shares when 56 object For example, describe a context be expressed as 56/8.	s of whole numbers, e.g., interpret 6 objects are partitioned equally cts are partitioned into equal shar in which a number of shares or a	56/8 as the number nto 8 shares, or as a es of 8 objects each. number of groups can	В	Low		
		3.0A.3	Use multiplication and division w equal groups, arrays, and measu with a symbol for the unknown m	ithin 100 to solve word problems urement quantities, e.g., by using a umber to represent the problem.	in situations involving rawings and equations	В	Low		
		3.0A.4	Determine the unknown whole nu three whole numbers. For examp tion true in each of the equation	where in a multiplication or division of the unknown numbers $8 \times ? = 48, 5 = [box]/3, 6 \times 6$	equation relating that makes the equa- = ?.	В	Low		
		A DAR 3.0A.5	Apply properties of operations of 24 is known, then 4 x 6 = 24 is of 5 x 2 can be found by 3 x 5 = 1 (Associative property of multiplic find 8 x 7 as 8 x (5 + 2) = (8 x	as strategies to multiply and divide also known. (Commutative property 5, then 15 x 2 = 30, or by 5 x 2 = ation.) Knowing that 8 x 5 = 40 ar 5) + (8 x 2) = 40 + 16 = 56. (Dist	Examples: If $6 \ge 4 =$ of multiplication.) $3 \ge 10$, then $3 \ge 10 = 30$. of $8 \ge 2 = 16$, one can ributive property.)	в	Low		
	1	3.0A.6	Understand division as an unknow the number that makes 32 when	wn-factor problem. For example, t multiplied by 8.	ind 32/8 by finding	В	Medium		
	100	3.0A.7	Fluently multiply and divide with multiplication and division (e.g., I properties of operations. By the one-digit numbers.	in 100, using strategies such as the knowing that 8 x 5 = 40, one know end of Grade 3, know from memory	e relationship between ws 40/5 = 8) or ory all products of two	в	Low		
		3.OA.8	Solve two-step word problems u equations with a letter standing answers using mental computation	sing the four operations, Represen for the unknown quantity. Assess th on and estimation strategies includi	t these problems using re reasonableness of ng rounding.	В	Medium		
		3.OA.9	Identify arithmetic patterns (inclu table), and explain them using p times a number is always even, a into two equal addends.	uding patterns in the addition tabl roperties of operations. For exam and explain why 4 times a number	e or multiplication ple, observe that 4 can be decomposed	B	Low		



	Analyze, Compare, and Compose 3-Dimensional Shapes	2- and 3-Dimensional Composite Shapes	Analyze, Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons and 3-Dimensional Figures	Categorize Shapes with Common Attributes	Partition Shapes into Parts with Equal Areas
4. Geometry						

	STANDARD	STANDARD DESCRIPTION	AE-CCR LEVEL	TABE 11/12 EMPHASIS LEVEL
(0)	2.G.1	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	В	Medium
METRY (109	3.G.1	Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	В	Medium
GEO	3.G.2	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.	В	Low
	2.G.3	Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	в	Low



	Organize Interpre	Drganize, Represent, and nterpret 3 Categories of Da		Indirectly Measure Lengths through Iteration	Graphs and Bar Graphs		Line Plots i	Measure and Estimate Lengths in Standard Units		s Solve Problems Involving Time, Volume and Mass		
. Measurement and Data					Represent Whole Number Lengths on a Number Line	Measuring and Estimat Areas of Plane Figures	ing	Solve Problems Involv Perimeter of Polygon	ving s	Use Areas to Model Additio and Multiplication		
		STANDARD		51/	ANDARD DESCRIPTION		AE-CCR LEVEL	TABE 11/12 EMPHASIS LEVEL				
		3.MD.1	Tell a word repre	nd write time to the nearest problems involving addition senting the problem on a nur	minute and measure time interva and subtraction of time intervals nber line diagram.	ls în mînutes. Solve în mînutes, e.g., by	в	Medium				
		2.MD.2	Meas meas	sure the length of an object to urements; describe how the t	wice, using length units of differe wo measurements relate to the s	nt lengths for the two ize of the unit chosen.	В	Low				
	(9	3.MD.2	Meas gram step using	sure and estimate liquid volur is (g), kilograms (kg), and lite word problems involving mas drawings (such as a beaker	nes and masses of objects using rs (I). Add, subtract, multiply, or ses or volumes that are given in with a measurement scale) to re	standard units of divide to solve one- the same units, e.g., by present the problem.	В	Medium				
	80	2.MD.3	Estim	ate lengths using units of inch	es, feet, centimeters, and meters		В	Low				
	DATA (2	3.MD.3	Draw eral o using which	a scaled picture graph and categories. Solve one- and tw information presented in sca e each square in the bar grap	a scaled bar graph to represen vo-step how many more and how led bar graphs. For example, do oh might represent 5 pets.	t a data set with sev- many less problems aw a bar graph in	в	Low				
	TAN	2.MD.4	Mea: diffe	sure to determine how much I rence in terms of a standard	onger one object is than another length unit.	, expressing the length	В	Low				
	REMEN	3.MD.4	Gene fourth mark	erate measurement data by n hs of an inch. Show the data ed off in appropriate units -	neasuring lengths using rulers mo by making a line plot, where the whole numbers, halves, or quart	urked with halves and horizontal scale is ers.	В	Low				
	EASU	3.MD.5	Recog	gnize area as an attribute of nent. (3.MD.5.b)	plane figures and understand c	oncepts of area mea-	В	Low				
	W	2.MD.6	Repression space	esent whole numbers as lengt ed points corresponding to th and differences within 100 o	hs from 0 on a number line diag e numbers 0, 1, 2,, and repre n a number line diagram.	ram with equally sent whole-number	В	Low				
	3.MD.7 Relate area to the operations of multiplication and addition. (3.MD.7.a, 3.MD.7.b, 3.MD.7.c, 3.MD.7.d)					В	High					
		3.MD.8	Solve findin iting diffe	e real world and mathematica og the perimeter given the sid rectangles with the same per rent perimeters.	al problems involving perimeters le lengths, finding an unknown si imeter and different areas or w	of polygons, including de length, and exhib- th the same area and	В	Medium				
		2.MD.10	Draw with the lems	a picture graph and a bar up to four categories. Solve s using information presented i	graph (with single-unit scale) to i imple put together, take-apart, n a bar graph.	epresent a data set and compare prob-	В	Low				







Considering how much you already know bout the Matrix, how would you use this tool in your ABE/GED classroom?

Domain	NRS	Level 1		NRS	Level 2			NRS	Level 3			NRS	Level 4	
	Place Value of 2 Digit Numbe	ns Add and Submact 2 Clight Numbers	Place Value of 3 Digit Number	Add and Subtract 3 Digit. Numbers	Round Whole Numbers to the Nearest Tensor Hundrids	Use Propertie sof Operations t Pedicim Multi Olgit Arith mitte	o Generalize Understanding of Place Value	Read and Write Multi Digit Numbers in Names and Expanded Form	Multiply 4 Digit Numbers by I to 2 Digit Numbers	Use Place Value to Understand Docimals				
1. Number and Operations: Base Ten	Compare 2 Digit Numbers	Model Addition and Subtraction of 2-Digit Number	Compare 3 Digit Numbers 5	Model Addition and Subtraction of 3-Digit Number	Multiply 1 Digit Numbers By 2 visi Digit Multiples of 10	Mentally Add and Subtract 10 or 100 to 3 Digit Numbers	Compare Any Multi Digit Number Base Operations with Multi- Digit Numbers in Standard Also othm	Round Multi Digit Numbersto Any Rise Value Perform Bask: Operations on Decimal Numbers Using Multiple Bratelies	Divide 4 Dige Numbers by 1 Dige Numbers Round Decimals to Any Place	Read, Witte, and Compare Decimals to Thousandths Divide 4 Digit Numbers by 2 Digit Numbers Using Multiple Stategelies				
2. Operations and Algebraic Thinking	Solve Addition and Subtractio Problems within 20 Commutative and Associative Property of Addition	n The Equal Sign Solving Addition and Subtraction Equations	Solve Addition and Subtraction Problems within 100 Commutative and Associative Property of Multiplication	Solve Multiplication and Division Problems within 100 Solve Multiplication and Division Equations	Multiplication Facts with in 10 Distributive Property of Multiplication	0 Solve 2 Step Problemsor Equations Model Multiplication and Division with in 100	Solve Multi: Step Problems Using Basic Operations Check Answers Using Mental Computation and Estimation Write and Interpret Numerica	Interpret Multiplication as Comparison Statements Solve Problems Involving Multiplicative Comparisons Interpret Expressions without	Interpret the Remainder in Problems Find All Factor Plans of Any 2 Digt Whole Number Generate and Analyze Numer	Multiples of 1- Digit Numbers Up to 100 Prime and Composite Numbers within 100 c Identify in explicit Features of a				
3. Measurement and Data	Organize, Represent, and Interpret 3 Categories of Data	Indirectly Measuré Lengths through Iteration	Analyze and Generate Picture Graphs and Bar Graphs Represent Whole Number Lengths on a Number Line	Analyse and Generate Line Plots Measuring and Estimating Areas of Plane Figures	Measure and Estimate Length in Standard Units Solve Problems Involving Perimeter of Polygons	s Solve Problems Involving Time Volume and Mass Use Areas to Model Addition and Multiplication	Expressions 5. Solve Problems in Length, Time, Volume, Mass and Money Including Fractions Apply Area and Perimeter Romulas for Rectangles. Measure and Stretch Angles in While Number Deares	Evaluating Them Solve Problems in Length, Time, Volume, Mass and Money including Decimals Convert Measurements within a System Solve Addition and Subtraction Problems for Unixnew Apdie	and Geometric Passens : Solve Problems Involving Information Presented in Line Plots Dispaniae Unit Praction Data (1/2, 1/4, 1/8) in a Line Pibe	Patrient from a Rule Recognize Angles Understand Concepts of Angle Measurement				
4. Geometry	Analyze, Compare, and Compose 3 Dimensional Shapes	2 and 3 Dimensional Composite Shape s	Anshae, Draw and Compare Shapes Having Specified Attributes	idontify Common Polygons at 3 Ormencional Agures	nd Categorite Shapes with Common Attributes	Partition Shapes into Parts wit Equal Areas	h Draw and identify Points, Line Line segments, and Rays Draw and identify Angles, Perpendicular and Pacellel Lines Represent 3. Dimensional	a. Solve Problemsby Graphing Points on the Coordinate Plan Classify 2 Dimensional Figures into Categories Based on Properties Use Nett to Find the Surface	Solve Problems Involving Area Surface Area, and Volume Sold Areas of Polygons by Composing or Decomposing	Draw Polygons in a Coordinate Plane Find the Length of a Skie with the Same First or Socand Coordinate	Solve Problems Involving Scale Diswings of Geometric Figure 5 Solve Problems Involving Angle Meas "Aireas, SA and Volume	Produce Congruence and Similarity Using Models Recognize Congruence and Similarity from Transformations	Angle Sum and Externor Angles of Triangles and Transversals Byptain and Apply the Pythagorean Theorem	
5. Number and Operations: Fractions			Represent Fractions with Denominators 2, 3, 4, 5, or 8 or a Number Line	Recognize Equivalent Practice on a Number Line	nt Use Visual Models to Represent Equivalent Praction	Compare Fractions with the same Numerator or Denominator	Rigures Using Nets Generate Equivalent Fractions Use Models to Illustrate Equivalent Fractions	Area of Figure 3 Compare Fractions Using Common Numeristors or Denominators Compare Fractions Using Benchmark Fractions Using Benchmark Fractions Such as 1/2	Decompose Practions as Sum i Practicos with the same Denominator Add and Subtract Mixed Numbers Using Equivalent Practions	f Decempose Fractions as Multiples of Unit Fractions Multiply Fractions by a Whole Number		. 0	\mathcal{D}	
							Multiply and Divide Fractions	Solve Problems1 molving Multiplication and Division of Fractions	Convert Fractions with Denominators 10 or 100 to Decimals	Solve Problems1 two Ming Addition and Subtraction of Fractions		_	-	1
6. Expressions and Equations							When and svaluate Algobraic Depressions with Deponents Pentium the Ordionof Operations on Algobraic Depressions	Identity and Gonerate Equivalent Agebraic Expressions Reason and Solve One Variabi Equations and Inequalities	Use substrution or inequality is than Equation or inequality is True IP Use Variables to Represent Two Related Quantities in a Problem	Express Une Quantity at the Dependent Variable of the Another Quantity Une 6 mphs, Tables and Equations to Show Variable Relations hips	Add, subtrad, Rector, and Expand Linear Expression t Rewrite Expressions to Show Relationships Between Quantities Solve Simultaneous Linear	Construct aquations and Ine qualities to Solve Problems Solve Problems U sing Algebra Equations with Rational Conflicients	Apply the Properties of Big points to Gene ate Rouivalent Exale stions Is Brahuste Spalae and Cube Roots of Portect Squares and Cubes	Solver Holderns In Scientific Quantities in Scientific Notation Graph Proportion al Relationships Unit Rate asthy Slope
7. The Number System							Ruently Divide Multi Digit Numbers Rod the Least Common Multiple of Two Numberss 12	Fluently Add, Subtract, Multip and Divide Multi Digit Decima Use Models to Illustrate, Interpret and Compute	ly Rind the Gireatest Common Is Ractor of Two Numbers 5 100 Solve Problems Involving Division of Practions by	Apply Distributive Property to Generate Equivalent Expressions	Equations in One Variable Use Integers to Represent Quantities in Real World Consexts Plot/Find Rational Numbers on a Number Une	Plot/Find Ordiend Pairs of Rational Numbers on a Coordinate Plane Understand and Evaluate Absolute Value of Rational	Biplain Statements of Order and Herquality Using a Number Une Solve Problems by Graphing	Add and Subtract Rational Numbers Using a Number Line Multiply and Divide Rational Numbers
						_		Quotionts of Flactions	Radions		Convert a Rational Number to Decimal	Numbers Solve Problems I nucliving Base Operations on Rational Numbers	Red Rational Approximations of irrational Numbers	Estimate the Location of Irrational Numbers on a Number Line
8. Ratios and Proportional Relationships							Describe a Relationship Between Two Quantities Usin a Ratio			_	Explain the Unit Rate a/b Associated with the Ratio a :b, with $b \neq 0$.	Use Various Techniques to Solve Problems I meriving Ratios	Represent Proportion al Relationships by Equations and Graphs	Solve P to blems in so Ming Proportion al Relations hips
9. Statistics and Probability							Discuss Statistical Questions Involving Variability in Osta	Discust Statistical Questions Involving Center, Spread and Overall Shape	Discuss the Measure of Center and Variation for a Numerical Data Set	Display Numerical Data In Plots on a Number Line: Dot Plots, Histograms, Box Plots	Relate Measures of Center and Variability to Data Distribution and Context	Draw informal Comparative Inferences About Two Populations	Find or Approximate the Probability of Simple & Compound Events with Variou Techniques	Construct and interpret Scatte Plots from Two Way Tables an Vice Vecto
											Summariae and Describe Numerical DataSets Define. Publicite and Common	Use Interquatile Range and MAD to Draw Comparative Interpret the Equation 4 - 19	Use Random Sampling to Draw Inferences About a Population	Use the Equation of a Linear Model to Solve Problems
10. Functions											Functions	b at Defining a Linear Function	Linear Relationships	Sile to the Functional Relationship Botween Two Quantities



Benefits to the Teacher/Student

Domain	NRS	Level 1		NRS	Level 2			NRS	Level 3			NRS	Level 4	
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1. Number and Operations: Base Ten	Concert I Dig to Long to	And a real way and	Company & Real Woman	Matching P3 Dep Martine	Distance of all	Manufactory and a set formation and	Constitution way follow inget Statistic Constitutions within Multi- Drugst Neurocharts in Multi- Statistics	Protected Notice Degree NoticeBalance And Annu Allenter Verlage Annual Sector Balance Concentration and Concentration Researchers Concentration Concentration Researchers Concentration	District & Digit factoriation for 1 Digit Districtions in the Arry Paciety	Country of the Countr				
2. Operations and Algebraic Thinking	Lotus Alaberton and Subhamo Problems & Albert 20 Commutative And American Problems 20 Middlen 7	The Date Sign Suborg Interface and Editoric Suppliers	Ender Aufderung und Suterindenen Prodesen Luw Men (LEO) Commensiehten auss Alters teatiere Progenerg of Musiky & atom	Carlon Shartiget Johns and Discours Print hand settlent and balan Multiplic reason and Discourse Egyptication	Charling to believe the set of an in 1990 Design that the set of t	Date of the product o	Act Ran Advanti Star prevalences Uning Bacelli Gascardonist Cherce & Anterestor Uning Mecetari Companyed on and References Winter and references Magnesister Winter and references	In Any proof Sole, Regine granm and Commany artises In 28 address of the Sentre Providence of Company articles United proofs of the processed of a set fracted for the specific design of the set fracted for the specific design of the set fracted for the set of the processed of the set fracted for the set of the processed of the set fracted for the set of the set	Induce part Oast Automatic data an Provid All Particul Property of Autop 2 Coges Website Recorders Statements and Anti-Antiput Records	Multiplication of 2 Chiefs Automations Up the 200 Policing and distribution Meaning and without 200 Claim wathy thick agency is Proceedings of a Policing Transport & Policing State				
3. Measurement and Data	Organiza, Arganiza of pod mangent 3 Categories of Date	No devote by Miccourse Longths Through paradises	Analyse and tax words. Motion decade, and Bar decays. Real-word White Namiber Line Sengths on a Namber Line	Arrestyler one generate Lyne Pare Missionarised and Ethymolypig Andres of Plane Arguntus	Management prod Electronic to Agrice In Brandbard Clinics Michael Productions Uncollining Personantian of Prologones	Colors Responses Internation & Trans Vincenz and Marss Unit Antice State And State and Multiplication	 Soliver Productions on Long N, Press, Vallasse, Milato and Mousie, Instantion (2) - addition departy Access and Percentration for any status for 4 montain plans Mecanism and the status angles. 	Solve Weight weight to Length, Tonia, Vallania, Massi and Monitoria, Isalia generation Contrart Mission and Contrart Solver Massion and Salt to active Solver Massion and Salt to active	So had Produktions the broking to fair material. Proceeding on Long Process Origitalize Crest Wight Dirith 1970, 1/4, 1/90 or a Long Page	Recognize Angles Unidentitation Constrants of Angles Michaelenation				
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5. Number and Operations: Fractions							Une Montelle for Stanfords. Equivalence of Stanfords in	Compared Fragments University Reconciliant acts Fragment to the Recent acts A/2	Adult actual Sector Sector Alfonsia Manufacture Lineig Experimenter Prantitative Concentrative	Multiple Fragment by A Whete Revisition				
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6. Expressions and Equations							Expension of the second expension of Expension of the Original of Operations and Algorithms Expension by N	Experience Agenticate Experience Agenticate Experience and Experience Agentic Experience and Experience	Man Statement of Automatics and Transformer and Register and Transformer for Register and Transformer Conservations on a Production	Experience of the second secon	Anno, Add Sont, Andrew, and Capanets I contact for an electron Received Experimental to Show Received Representation Realistic schemes Berley Speculationers (Contact	Construct Sponton and International And School Programme Security Production (Annual Result Sciences)	August the Properties of Reparation to be an entry By availant Experiment Workshop Sectors and Cohe Reports of Parebut Separation and Cohes	Country of the second strate for the Country of the second secon
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7. The Number System							Monthly Long & Constraints Monthly of Free Wommittees a 5.5	Out a Matalanii, ko muu or akai. In Konginati asub Comuputin Ouanmonta of Pala Set m	Berlan Prink teles incustoring Distributed of Patienticity By Print teles		Norther Later	Administration of Automatic Administration of Automatic National Systems	And a Personal Section of Section 1	Multiply and Droubs Rational Numbers
											Concerning & Rectional Major Los By	Open a constant of Reduction	of brackets at Arandon in	Automatic the Condition of Automatic call Number and an a Number Const
B. Ratios and Proportional Relationships							Bettering in Trees Classes lateral				No should be with the Reter all, and the	Entrie of Product Toucher oparts for Entries of Productions 11 mars for the	Relation related by Equations and	Program Scott al Rial al brings
9. Statistics and Probability							Constants Statements Characteristics on Insulations Variationity in Clarks	Disease States and Constant and Musical States and Occurrent States	and Vanataria for a Numerical Date for	Dispersy Representation Date on Pro- los a Nacindust Gran, Don Murs. Hostographies, Box Modes	April 14 Million and Al Control whe Vermining to Cotta Directory and Electron	Distance in Revenue of Colonge & settings instrumentation Albertail Texts Programment as an	Hend all papersonate the Probability of Security R. Composed to Receive with Vision 20 (Receive)	Contentroph and interpret 1 billion Platti Pati in Two Wyy Takibal a Watti Watte
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10. Functions											A contract of the second secon	the state of the s	a statut beitabe dange	The sub- the figure state of the

- The Curriculum Matrix is a handy guide for teachers so that they are able to prioritize and differentiate teaching to the most important skills to adult students based on the student's ability, curriculum and standardized assessment.
- The Curriculum Matrix shows every skill/concept/topic that has to be covered in the ABE Classroom.
- The Curriculum Matrix highlights every standard that is tested in the TABE 11 & 12.



Hyperlinks to Standards and Resources

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Domain	Novel 1 Place Value of 2 Digit Numbers d Subtract 2 Digit	Place Value of 3	S Lev 2	ora to stalls of R	ead an e	vel 3	NRS Level 4	
1. Number and Operations: Base Ten	Numbers	Nurbes	Nearest Tensor Hundreds Perform Multi Digit A	Ithimetic Place Volume N	umbers in Names and xpanded Form	to 2 Digit Numbers Docimals		
	Compare 2 Digit Numbers Model Addition and Subtraction of 2 D	Compare 3 Digit Numbers Model Addition and Subtraction of 3 Digit N	Multiply1 Digit Numbers By2 MentallyAdd and Sut umbers Digit Multiples of 10 or 100 to 3 Digit Num	tract 10 Compare Any Multi Digit Re bors Number An Basic Operations with Multi-	ound Multi Digit Numberste ny Place Valu	o Divide 4 Digit Numbers by 1 Read, Write, and Compare		т
				Digit Numbers in Standard Di Algorithm M	ecimal Numb 1.2	2 Use place value u	inderstanding and the	
2. Operations and Algebraic Thinking	Solve Addition and Subtraction The Equal Sign Problems within 20 Commutative and Associative Solving Addition and	Solve Addition on Autoplication and roblems within 100 curve in multitive and Associative Son	Multiplication Facts within 100 Solve 2 Step Problem n 100 Equations Distributive Property of Model Multiplication	or Solve Multi Step Problems in Using Basic Operations Cr and Check Answers Using Mental So	terpret Multi omparison St. olive Problem	within 100.	rations to add and subtract	
	Property of Addition System on Equations	erty of Multiplication Division Equ	Division within 200	Computation and Estimation M Write and Interpret Numerical In	tuitiplicative (terpret Bipre a)	Add within 100, inc	cluding adding a two digit	
3. Measurement and Data	Organize, Represent a indirectly Measure Lengths	d Generate Picture Analyze and Generate L	Inc. Measure this Solve Problems Involution	Ing Time, Solve Problems in Length, Solve Problems in Length, Solve Time, Volume, Mass and Th	olve Problem.	number and a one-	-digit number, two-digit	
		Rep n e Number Measuring and Estimati	na Use Areas to Nodel A	Money Including Fractions M dotton Apply Area and Perimeter Co	ton ey Includi: onvert Measu	numbers, and mult	tiples of 10.	
	111111	Lengths ber Line Areas of Plane Figures	of Polygons and Multiplication	Formulas for Rectangles a Measure and Sketch Angles in So	System b)	Understand that in	adding two-digit numbers,	
	Ansiyee, Compare, and 2 and 3 Dimensional	Analyze, Dra	ons and Catch with Partition Shapes into	Whole Number Degrees Pr Parts with Draw and identify Points, Lines, So	roblems for 1 alive Problem	one adds tens and	tens, ones and ones; and	
4. Geometry	Compose 3 Dimensional Composee Shapes Shapes	Shapes Having Attributes	Common Equal Areas	Line segments, and Rays Po	oints on the C	sometimes it is neo	cessary to compose (create) a	
	(/////			Dow and identity Angles, Cl Perpendicular and Parallel in	to Categories			
	111111			Represent 3 Dimensional Ut Represent 3 Dimensional Ut	se Nes to Fie C)	Given a two-digit n	umber, mentally find 10 more	
5 Number and Operations'	//////	Represent Fractions with Denominators 2, 3, 4, 6, or 8 on on a Number Line	actions: Use Vin Represents Represents Represents	th the Generate Equivalent Fractions Co	omplare Fract	or 10 less than the	number, without having to	
	1/////	a NumberLine	Denominator	Use Models to Illustrate Co	eno minators omplare Fract	count.		
Fractions		(/////		Equivalent Fractions B4	enchmark Fra d)	Subtract multiples	of 10 in the range 10-90 from	
////		1/////		Multiply and Divide Fractions So	alve Problem: fultiplication	multiples of 10 in the	he range 10-90 (positive or	
1115	181111	11111	11/1/	Write and Evaluate Algebraic Id	tentify and Gr	zero differences).		lems in volving
	//////	/////		Perform the Didles of	eason and So e)	Use concrete mod	els, drawings, and strategies	tortional
6. Expressions and Equations	//////	/////		Operations on Algebraic Ec Expressions	quations and	based on place val	lue, properties of operations,	ips - Unit Rate as the
	11111	1/////	11/1/1			and/or the relations	ship between addition and	
7. The Number System				Fluently DMde Multi Digit Fl Nutribers ar	iyentiy Add, S nd Divide Mu	subtraction. Relate	the strategy to a written	ibtract Rational Ising a Number Line
				Find the Least Common U	ise Models to	method and explai	n the reasoning used.	id Divide Rational
				Muspe of two numberss 12 in	Juppiers and compute	Fractions	Ansonae Value of Actional Numbers Numbers Footopers Participal Numbers - Exceptional Numbers	in the Location of
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8. Ratios and Proportional					-			lems in volving al Relations hips
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Q. Statistics and Drobability								Two Way Tables and
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10. Functions	Lessons	LINKS	TOOIKIT	> VI	deos	webinar	s workshops	Functional ip Between Two



Overlays

Domain	NRS Level 1		NRS Level 2				NRS Level 3				NRS Level 4			
1 Number and Operations	Place Value of 2 Digit Number	s Add and Submart 2 Digit Numbers	Place Value of 3 Digit Numbers	Add and Subtract 3 Digit Numbers	Round Whole Numbers to the Nearest Tensor Hundreds	Use Propertie sof Operations to Perform Multi-Digit Arithmetic	o Generalize Understanding of Place Value	Read and Write Multi-Digit Numbers in Names and Expanded Form	Multiply 4 Digit Numbers by 1 to 2 Digit Numbers	Use Place Value to Understand Decimals				
Base Ten	Compane 3 Digit Numbers	Model Addition and Subtraction of 2 Digit Number	Compore 3 Oigit Numbers	Model Addition and Subtraction of 8 Digit Number	Multiply 1 Dge Numbers By 2 s. Dige Multiples of 10	Mentally Add and Subtract 10 or 200 to 3 Digit Numbers	Compare Any Multi Orgit Number Basic Operations with Multi- Digs Numbers in Standard Meanthm	Round Multi Digit Numbersto Any Place Value Perform Basic Operations on Decimal Numbers Using Multivisity Protection	Divide 4 Digit Numbers by 3 Digit Numbers Round Decimals to Any Place	Read, Wittle, and Compare Decimals to Thousandths Divide 4 Digit Numbers by 2 Digit Numbers U ang Multiple Umsteaders	-			
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20 Commutative and Associative Property of Addition	n The Equal Sign Solving Addition and Subtraction Equations	Solve Addition and Subtraction Problems within 100 Commutative and Associative Property of Multiplication	Solve Multiplication and Division Problems with in 100 Solve Multiplication and Division Equations	Multiplication Facts with in 100 Distributive Property of Multiplication	Solve 2 Step Problemsor Equitions Model Multiplication and Division within 100	Solve Multi Step Problems Using Basic Operations Check Answers Using Mental Computation and Estimation Write and Interpret Numerical Exercise proc	Interpret Multiplication as Comparison Statements Solve Problems Involving Multiplicative Comparisons Interpret Expressions without Evolution Them	Interpret the Remain der in Problems Rind All Factor Plans of Any 2 Digit Whole Number Generate and Analyze Numeri and Generativ Statema	Multiples of 2: Digit Numbers Up to 100 Prime and Composite Numbers within 100 ide mBy Inexplicit Features of a Distant State	5			
3. Measurement and Data	Organize, Represent, and Interpret 3 Categories of Data	Indirectly Measure Lengths through Iteration	Analyse and Generate Picture Graphs and Bar Graphs Represent Whole Number Lengths on a Number Line	Analyze and Generate Line Plott Measuring and Estimating Areas of Plane Figures	Measure and Estimate Lengths In Randard Units Solve Problems Involving Perimeter of Polygons	Solve Problems Involving Time Volume and Mass Use Areas to Model Addition and Multiplication	Solve Problems in Length, Time, Volume, Mass and Money Including Fractions Apply Area and Perimeter Komulas for Roctanglis Measure and Sketch Angles in	Solve Problems in Length, Time, Volume, Mass and Money Including Decimals Convert Measurements within a System Solve Addition and Subtraction	Solve Problems Involving Information Presented in Line Plots 1. Organiae Unit Praction Data (J/2, 1/4, 1/8) in a Unio Plat 1.	Recognize Angles Understand Concepts of Angle Measurement				
4. Geometry	Analyse, Complane, and Compose 3: Dimensional Shapes	2 and 3 Dimensional Composite Shape s	Ansiyee , Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons an 3 Dimonsional Agures	d Categorite Shapes with Common Attributes	Patition Shapes into Parts with Equal Areas	Whole Number Degrees Draw and identify Points, Unes Une segments, and Rays Draw and identify Angles.	Problems for Unknown Angle Solve Problemsby Graphing Points on the Coordinate Plan Classify 2-Dimensional Figures	Solve Problems Involving Area Surface Area, and Volume Rind Areas of Polygons by	Draw Polygons in a Coordinate Plane Find the Length of a side with	Solve Problems Involving Scale Dowings of Geometric Figures Solve Problems Involving Angle	Produce Congruence and Similarity Using Models Recognize Congruence and	Angle Sum and Extensor Angles of Triangles and Transversals Biptom and Apply the	
						_	Perpendicular and Patallel Lines Represent 3: Dimensional Reputes Using Nets	into Categories Based on Properties Use Nots to Find the Surface Area of Figures	Composing or Docomposing	the Same Rest or Second Coordinate	Mear, Areas, SA and Volume	Semilarity from Transformations	Pythogorean Theorem	
5. Number and Operations: Fractions			Represent Fractions with Denominators 2: 3: 4, 6, or 8 or a Number Line	Recognize Equivalent Practions on a Number Line	 Use Visual Models to Represent Equivalent Fractions 	Compare Fractions with the I Same Numerator oy Denominator	Generate Equivalent Practions Use Models to Illustrate Equivalent Practions	Compare Fractions Using Common Numerators or Deno minators Compare Fractions Using Benchmark Fractions Such as 1/2	Decompose Fractions as Sum o Fractions with the same Denominator Add and Subtract Mixed Numbers Using Equivalent Environs	f Decompose Fractions as Multiples of Unit Fractions Multiply Fractions by a Whole Number				
			-				Multiply and Divide Practions	Solve Problems Involving Multiplication and Division of Fractions Identify and Generate	Convert Fractions with Denominato 5 10 or 100 to Decimals Use Substitution to Determine	Solve Problems I no htng Addition and Subtraction of Fractions Express One Quantity as the	Add, Subtract, Roctor, and	Construct Equations and	Apply the Properties of	Solve Problems Involving
6. Expressions and Equations							Expressions with Exponents Perform the Oxfor of Operations on Algebraic Expressions	Equivalent Algebraic Expressions Reason and Solve One Variable Equitions and Inequalities	If an Equation or inequality is True is use Variables to Represent Two Related Quantities in a Problem	Dependent Variable of the Another Quantity Use Grophs, Tables and Equations to Show Variable Reliations hips	Expand Linear Expressions Rowrite Expressions to Show Relationships Between Quantities Softe SimultaneousLinear Exaction in One Variable	Inequalifies to Solve Problems Solve Problems Using Algebia Equations with Rational Coefficients	Exponents to Sene rate Spurvalent Explore stores c Brailuate Spusie and Cube Roots of Perfect Spuares and Cubes	Quantities in Scientific Notation Graph Proportional Relationships Unit Rate as the Slope
7. The Number System							Ruently Divide Multi Digit Numbers	Fluently Add. Subtract, Multipland Divide Multi Digit Dooma	ly Rind the Greatest Common is Factor of Two Numbers \$ 100	Apply Distributive Property to Generate Equivalent Expressions	Use integers to Represent Quantities in Real World Contexts	Pot/Find Ordered Pairs of Rational Numbers on a Coordinate Plane	Biplain Statements of Order and Inequality Using a Number Une	Add and Subtract Rational Numbers Using a Number Line
							Multiple of Two Numberss 12	Interpret and Compute Quotients of Fractions	Division of Enclose by Reactions]	S Number Line Convert a Stational Number to Decimal	Absolute Value of Rational Numbers Solve Problem time living Back Operations on Rational	End Rational Approximitions of Irrational Numbers	Numbers Estimate the Location of Invational Numbers on a
8. Ratios and Proportional Relationships							Describe a Relationship Between Two Quantities Using a Ratio				Explain the Unit Rate 3/b Associated with the Ratio 3/b, with 5 4 0	Numpers Use Various Techniques to Solve Problems I no Ming Ratios	Represent Proportion al Relationships by Equations and Graphs	Number Che Solve Problems Ione Mag Proportion al Relations hips
9. Statistics and Probability				C	or	ni	Discuss Statistical Questions Involving Variability in Octa	Discuss Statistical involving Conter. di and orali Shape	Incuse the Measure of Center I Variation for a Numerical Data Set	Display Numerical Dista in Plots on a Number Line: Oot Plots.	Related Lines of Conter and Variable Data Distribution and Co mman and Describe umore Data Sets	Draw in formal Comparative Inferences About Two Populateins Us erinterquaistile Range and MAD to Draw Comparative	Rind on Approximate the Probability of Sim pile & Compound Bients with Various Techniques Use Random Sampling to Draw Inforences About a Population	Construct and Interpret Scatter Plots from Two Way Tables and Vice Virna Use the Equation of a Linear Model to Solve Problems.
10. Functions											etine	Inferences Interpret the Equation y – ms b as Defining a Line of Punction	Construct a Function to Model Direct Relationships	Describe Qualitatively or Secan the Fuscher al Reaction his Between Two Quantities

- TABE 11 & 12 Blueprints
- High Impact Indicators
- Math in Various Career Clusters
- Various Thematic Approaches
- Various Learning Trajectories







Evaluation

IPDAE would like to know what you think! Please complete this quick survey.



Thank You





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