Organization Name	Department of Corrections ABE Programs				

Class/Program Name	ABE Literacy 2 Math				
Class Site(s)	DOC			**Days & Times**	M-F; 90 minutes
Student Placement Level(s)	4.0 to 8.9	**Class Assessment(s)**	TABE test Reviews/tests	**Scaled Score Range**	
Class Led By	*ABE Literacy Teachers*	**Delivery Style**	Class X One-to-One X Distance Learning Hybrid Other		
Class Goals	Attain mathematical competency in Number sense, algebra, geometry and statistics/probablility				
Standards Addressed	College and Career Readiness Standards (CCRS)	Level C: Number Base Ten (4.NBT.4-6, 5.NBT.3, 5-7, 6.NBT.2-3) Level D: Number Systems (6.NS.7, 7.NS.1-3) Level C: Fractions (4.NF.1-2, 3c-4c, 5.NF.1, 2-4, 7, 6.RP.1-2) Level D: Ratio & Proportional Reasoning (6.RP.3, 7.RP.1-3) Level C: Operations and Algebraic Thinking (4.OA.1, 4.OA.5 5.OA.1-2, 6.EE.1-2) Level D: Operations and Algebraic Thinking (7.EE.1, 7.EE.3-4, 8.EE.5,7; 8.EE.8) Level C: Geometry & Geometric Measurement (4.G.1, 5.G.1-3, 6.G.1,3; 5.MD.3-5) Level D: Geometry & Geometric Measurement (7.G.1, 7.G.4, 7.G.6, 8.G.2, 8.G.4, 8.G.77-8) Level C: Measurement and Data (6.SP.1-3) Level D: Measurement and Data (6.SP.5, 7.SP.1-6, 8.SP.1-4)			
	Academic, Career, and Employability Skills Transitions Integration Framework (ACES TIF)	Effective Communication: Skills 1-3 Learning Strategies: Skills 1-4 Academic Language & Skills: Skills 1-3, 5			

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		Critical Thinking: Skills 1-4 Self-Management: Skills 1-3 Navigating Systems: Skills 1-2
	Northstar Digital Literacy Standards	Microsoft Excel PowerPoint
	Other?	Technology: DOC Offender Network

	CCR Standards Level C and D	Core Activities/Assessments	
Class Content	Number Base Ten/Number Systems Level C 1. Fluently add and subtract multi-digit whole numbers 2. Multiply a whole number of up to four digits by a none-digit whole number and multiply to two-digit numbers; illustrate and explain by using equations, rectangular arrays and/or area models 3. Find whole number quotients and remainders with up to four-digit dividends and one-digit divisors; illustrate and explain by using equations, rectangular arrays and/or area models 4. Read, write and compare decimals to thousandths 5. Read and write decimals to thousandths using base-ten, number names and expanded form 6. Compare two decimals to thousandths, using >, =, < 7. Fluently multiply multi-digit whole numbers 8. Find whole number quotients of whole numbers with up to four-digit dividends and two-digit divisors; write strategy and explain by using equations, rectangular arrays and/or area models	Contemporary Number Power Achieving TABE Success in Math Level M Break Through to Math Level 2	

9. Add, subtract, multiply and divide decimals to hundredths; write strategy and explain reasoning used
10. Fluently divide multi-digit numbers
11. Fluently add, subtract, multiply and divide multi-digit decimals
12. Find greatest common factor and least common multiple
13. Explain why a faction a/b is equivalent to a fraction (n x a)/(n x b) by using visual fraction models; use to recognize and generate equivalent fractions
14. Compare two fractions with different numerators and different denominators; record results using >, =, < and justify conclusions
15. Add and subtract mixed numbers with like denominators
16. Solve word problems involving addition and subtraction of fractions
17. Apply and extend previous understanding of multiplication to multiply a fraction by a whole number
18. Understand a fraction a/b as a multiple of 1/b.
19. Understand a multiple of a/b as a multiple of 1/b and use the understanding to multiply a fraction by a whole number
20. Solve word problems involving multiplication of a fraction by a whole number
21. Add and subtract fractions with unlike denominators (including mixed numbers)
22. Interpret a fraction as division; solve word problems involving the division of whole numbers leading to fraction answers
23. Apply and extend previous understanding of multiplication to multiply a fraction or whole number by a fraction
24. Apply and extend previous understanding of division to divide unit fractions by whole numbers and whole numbers by unit fractions
25. Interpret division of a unit fraction by a non-zero whole number and compute such quotients
26. Interpret division of a whole number by a unit fraction and compute such quotients

27. Understand the concept of a ratio and use ration language to describe the relationship
28. Understand the concept of a unit rate a/b associated with a ratio a:b with b not equal to 0

Level D

1. Understand that positive and negative numbers are used together to describe quantities having opposite directions or value
2. Understand sign of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane
3. Understand a rational number as a point on the number line
4. Interpret statements of inequality
5. Understand absolute value
6. Solve real-world problems by graphing points on a coordinate plane
7. Apply and extend previous understanding of addition and subtraction to add and subtract rational numbers
8. Understand p + q as the number located a distance [q] from p
9. Understand subtraction of rational numbers as adding the additive inverse $p - q = p + (-q)$
10. Apply properties of operations as strategies to add and subtract rational numbers
11. Apply and extend previous understanding of multiplication and division and of fractions to multiply and divide rational numbers
12. Understand integers can be divided, provided the divisor is not zero and every quotient is a rational number.
13. Convert rational number to a decimal
14. Solve real-word and mathematical problems involving the four operations with rational numbers

Ratio and Proportional Reasoning

Level D

1. Use ratio and rate reasoning to solve rea-world problems

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2. Make tables of equivalent ratios relating quantities with whole number measurements, find missing values and plot the pairs of values on a coordinate plane
3. Solve unit rate problems including those involving unit pricing and constant speed
4. Find a percent of a quantity as a rate per 100; solve problems involving finding the whole, given a part and the percent
5. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying and dividing quantities
6. Compute unite rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units
7. Recognize and represent proportional relationships between quantities
8. Decide whether 2 quantities are in a proportional relationship (graph)
9. Identify the constant of proportionality and verbally describe relationship
10. Represent proportional relationships by equations
11. Explain what a point (x,y) on the graph of a proportional relationship means in terms of the situation
12. Use proportional relationships to solve multi-step ration and percent problems (simple interest, tax, markups or downs, gratuities, commissions, percent increase/decrease, percent error)

Operations and Algebraic Thinking
Level C
1. Interpret multiplication equation as a comparison
2. Find all factor pairs for a whole number in the range of 1-100
3. Generate a number or shape pattern that follows a rule; explain informally
4. Use parentheses, brackets or braces in numerical expressions and evaluate
5. Write simple expressions that record calculation order and interpret numerical expressions without evaluating them

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6. Write and evaluate numerical expressions involving whole-number exponents
7. Write, read and evaluate expressions in which letters stand for numbers
8. Write expressions that record operations with numbers and letters
9. Ide4ntify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient);
10. Evaluate expressions at specific values of their variables; perform Order of Operations
11. Use variable to represent numbers and write expressions when solving a real-world or mathematical problem

Level D
1. Apply properties of operations as strategies to add, subtract, factor and expand linear expressions with rational coefficients
2. Solve multi-step real-life problems posed with positive and negative rational numbers in any form
3. Use variable to represent quantities in a real-world or mathematical problem and construct simple equations and inequalities to solve problems by reasoning about the quantities
4. Solve word problems leading to equations of the form px + q =r and p(x+q)=r. Solve equations of these forms fluently.
5. Solve word problems leading to inequalities of the form px+q>r or px+q<r. Graph the solution set and interpret.
6. Graph proportional relationships, interpreting slope
7. Solve linear equations in one variable
8. Give examples of linear equations in one variable with one solution, infinitely many solutions or no solutions
9. Solve linear equations with rational number coefficients
10. Analyze and solve pairs of simultaneous linear equations
11. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs

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12. Solve systems of two linear equations in two variables algebraically and estimate solutions by graphing the equations
13. Solve real-world and mathematical problems leading to two linear equations in two variables

Functions

Level D

1. Understand a function is a rule that assigns to each input exactly one output
2. Interpret the equation y=mx+b as defining a linear function

Geometry & Geometric Measurement	
Level C	
1. Draw points, lines, line segments, rays, angles (right, obtuse, acute) and perpendicular/parallel lines	
2. Define a coordinate system and use an ordered pair of numbers	
3. Represent real world and mathematical problems by graphing points and interpret coordinate values in context of the situation	
4. Understand attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category	
5. Find the area of right triangles, other triangles, special quadrilaterals and polygons	
6. Draw polygons in a coordinate plane given coordinates for vertices; use coordinates to find side lengths	
7. Apply area and perimeter formulas for rectangles in real world problems	Contemporary Number Power
8. Understand concept of volume, by counting cubes (cubic cm, cubic in, cubic ft)	Achieving TABE Success in Math Level M Break Through to Math Level 2
9. Find volume of a right rectangular prism with whole number side lengths by packing with cubes to show l x w x h = V	
10. Apply formulas (V = l x w x h or V = b xh) to find volumes in solving read world problems	

	11. Recognize volume as additive. Find volumes of solid figures of two non-overlapping right rectangular prisms by adding volumes, apply to solve real world problems
	Level D
	  1. Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas and reproducing in a different scale
	  2. Know the formula for area and circumference of a circle and use them to solve problems
	  3. Solve real-world problems involving area, volume and surface area of two- and three-dimensional objects
	  4. Understand when a 2-dimensional figure is congruent to another
	  5. Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two- and three-dimensions
	  6. Apply the Pythagorean Theorem to find the distance between two points in a coordinate system	

	Measurement and Data
	Level C
	  1. Recognize a statistical question
	  2. Understand a set of data has a distribution which can be described by its center, spread and overall shape
	  3. Recognize a measure of center for 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
	Level D
	  1. Summarize numerical data, such as by number of observations, median and/or mean, interquartile range. Describe nature of attribute under investigation and relating choice of measures of center and variability to distribution shape and context
	  2. Understand the idea of a sample of the population; valid sample
		Contemporary Number Power
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	3. Use data to draw inferences about a population with an unknown characteristic of interest. Gauge how far off the estimate might be. 4. Informally asses the degree of visual overlap of two numerical data distributions with similar variabilities (mean height of basketball team compared to soccer team) 5. Use measures of center and measures of variability to draw informal comparative inferences 6. Understand probability of a chance event is a number between 0 and 1 (larger greater likelihood) 7. Approximate the probability of a chance event by collecting data and predict the approximate relative frequency 8. Construct and interpret scatter plots. Describe: clustering, outliers, positive or negative association, linear association, nonlinear association) 9. Use the equation of a linear model to solve problems, interpreting the slope and intercept
Class Activities	Direct instruction, independent practice, worksheets and tests
Class Text(s), Educational Technology, & Other Instructional Materials	AGS Consumer Math, flashcards, One minute timings (frenzies), Websites: math-drills.com, edhelper.com, superteacherworksheets.com, worksheetworks.com