

Mathematics Curriculum- College Academic Readiness
PIEDMONT COMMUNITY COLLEGE
Adult Basic Skills

CTM.1- Whole Numbers: Students will develop and apply concepts to perform basic mathematics operations.		
Benchmark	Performance Indicator	Resource
CTM.1.1- Identify prime and composite numbers	Identify and write numbers as products of prime numbers for a minimum of five problems.	Transitions: preparing for college mathematics- pgs.- 6-7
CTM.1.2- Find GCF & LCM through prime factorization	Find the (GCF) in five problems and write each number in prime factored form; determine the least common denominator for at least five problems.	Transitions- pgs.- 7-9
CTM.1.3- Simplify one-step problems	Complete a minimum of 10 one-step problems; determine whether to add, subtract, multiply or divide.	Steck-Vaughn GED Skill Book – pgs. -6-8
CTM.1.4 - Simplify problems with multiple operations	Set up and perform operations in the proper sequence to get the correct answer. Complete at least 10 problems that involve 2-3 functions (addition, subtraction, multiplication, division, decimals, and percents).	Steck- Vaughn GED Skill Book- pgs. 15-19

CTM.2- Fractions, Decimals, and Percents: Students will become proficient in adding, subtracting, multiplying, and dividing fractions, decimals, and percents.		
CTM.2.1- Add, Subtract, multiply, and divide fractions	Solve at least four problems per function (4- adding, 4- subtracting, 4- multiplying, 4- dividing)	Transitions- pgs. 16-20; 23-27
CTM. 2.2- Reduce fractions to lowest terms	Reduce fractions to the lowest terms for a minimum of five problems	Transitions- pgs. 16-19
CTM. 2.3- Convert proper to mixed, mixed to proper	Convert a minimum of four proper fractions to mixed; convert a minimum of four mixed fractions to proper	Transitions- pgs. 10-15

CTM.2.4- Solve problems with exponents and square roots	Solve a minimum of 4 problems with exponents; solve a minimum of 4 problems with square roots. Use a graphing calculator to store values for variables and to check that expressions are equal.	Transitions-pgs. -119-123
CTM.2.5- Solve three types of percent problems	Multiply the base by the rate-minimum of 3 problems; divide the part by the rate-min. of 3 problems; divide the part by the base-minimum of 3 problems	GED Skill Book, pgs.- 12-15

CTM. 3- Ratio and Proportions: Students will be able to solve word problems by showing the relationship between two numbers.		
CTM.3.1- Solve word problems by determining ratio	Set up word problems and determine the correct ratio for a minimum of five problems	GED Skill Book, pgs.- 9-11
CTM.3.2- Solve word problems through the use of proportions	Set up a proportion to solve word problems for a minimum of five problems	GED Skill Book, pgs.- 9-11

CTM.4- Order of Operations: Students will be able to set up and perform operations in the proper sequence for multi-step problems.		
CTM.4.1- Simplify problems with multiple operations	Set up and perform operations in the proper sequence for a minimum of 10 problems	GED Skill Book, pgs. 16-17

CTM.5- Pre-Algebra, Simple Algebra: Students will become proficient in evaluating, simplifying, and solving algebraic expressions.		
CTM.5.1- Combine like terms	Combine like terms by evaluating the original expression and the answer for "x". Solve a minimum of five problems. Calculator usage: Use a graphing calculator to evaluate an expression for several values of "x". Complete a minimum of 3 problems.	Transitions: pgs. -29-31

CTM.5.2- Evaluate algebraic expressions	Write, evaluate, and simplify algebraic expressions for a minimum of five problems.	Transitions: pgs.- 28-29 GED Skill Book, pgs.- 26-27
CTM. 5.3- Solve algebraic expressions	Solve equations using addition, subtraction, multiplication, and division.	Transitions, pgs. 32-37
CTM. 5.4- Solve word problems through the use of algebraic expressions	Set up the equations and find solutions for a minimum of ten algebraic word problems.	GED Skill Book, pgs.- 34-36
<p>Checkpoint: Self-Evaluation- Covers competencies MT.1.1- MT.5.4. Students must score 80% or above for mastery. (Transitions, pg. 38-40)</p>		

CTM.6- Algebra: Students will become proficient in determining and solving basic to advanced algebraic expressions and equations		
CTM. 6.1- Perform operations on rational numbers	Add, subtract, multiply, and divide integers and rational numbers. Complete a minimum of 4 problems per function. Calculator usage: Use a graphing calculator to perform computations for at least one problem per function.	Transitions- pgs.-42-47
CTM. 6.2- Solve linear equations	Build a table; write and solve linear equations. Solve the equations for "x" for a minimum of four problems. Calculator usage: Use a graphing calculator to check solutions.	Transitions, pgs.- 48-55
CTM.6. 3- Solve linear inequalities	Solve simple and compound inequalities. Complete a minimum of five simple inequalities and five compound inequalities. Calculator usage: Use a graphing calculator to check the solutions to inequalities.	Transitions, pgs.- 56-63
<p>Checkpoint: Self-Evaluation- Covers competencies CMT.6.1-CMT.6.3. Students must score 80% or above for mastery. (Transitions, pgs. 64-65)</p>		

CMT. 6.4- Write and graph linear functions	Graph ordered pairs and determine the point of intersection; determine linear functions from graphs. Complete a minimum of five graphs.	Transitions, pgs. 66-74
CMT. 6.5- Solve systems of linear equations	Solve systems by graphing and using substitution and elimination. Solve a minimum of five problems by graphing; solve a minimum of five problems by using the elimination method (includes a minimum of two word problems).	Transitions, pgs. 88-96
CMT.6.6- Multiply polynomials	Multiply polynomials and apply special products. Use the distributive property when applicable. Complete a minimum of ten problems (total). Check the solution to the equality by building a table on a graphing calculator.	Transitions, pgs. 152-157
CMT. 6.7- Factor polynomials	Factor polynomials by using the greatest common factor (GCF), special products, and the “ac” method. Complete a minimum of three problems using each method. Check factoring by building tables on a graphing calculator and then verifying that the expressions have the same value in the table.	Transitions, pgs. 158-171
CMT. 6.8- Simplify radical expressions	Compute square roots, simplify radicals, and solve right triangle problems	Transitions, pgs. 158-165
Checkpoint: Self-Evaluation- Covers competencies CMT.6.6- CMT.6.8. Students must score 80% or above for mastery. (Transitions, pgs. 172-173)		