

MATH CONTENT STANDARD LEVEL 4: ALGEBRA

Adult learners will develop and apply algebra to solve a variety of real-life problems and to determine if the results are reasonable.

Benchmarks On exit of this level, learner is able to:	Applications Examples of how/where learners will use this skill:	I do it well enough	I want to work on it	I don't need to work on this now
4.9.1 Understand, use, write, and combine expressions and equations with like terms.	<ul style="list-style-type: none"> Use letters, with units, to represent quantities in a variety of contexts, for example: y = number of lbs, k = number of minutes, x = number of cookies. Represent information given in words using algebraic expression and equations, such as: "two times x plus 1" and "$2x+1$". 			
4.9.2 Understand and represent linear functions using table, equations, and graphs.	<ul style="list-style-type: none"> Identify an algebraic formula for a perimeter-side relationship of a square and rectangle, a distance-time graph, and conversions such as feet to inches. 			
4.9.3 Understand and apply proportional relationships, and relate to linear relationships	<ul style="list-style-type: none"> Interpret information from tables and graphs. Calculate weight vs. volume of water. Calculate base cost plus cost per unit. Determine distance and time under constant speed. 			
4.9.4 Understand and represent linear functions.	<ul style="list-style-type: none"> Find and graph the ratio of "rise and run" for a pair of points on the graph. Represent linear functions in the form of $y = x+b$, $y = mx$, and $y = mx+b$, and interpret slope and Y-intercept. 			
4.9.5 Understand and solve simultaneous equations, and represent non-linear functions.	<ul style="list-style-type: none"> Graph a parabola. Determine the projected motion of a ball, fireworks, or any falling object. Represent on a graph the temperature of a cup of cocoa as it cools. 			
4.9.6 Understand and solve equations, simultaneous equations, and linear inequalities.	<ul style="list-style-type: none"> Determine the various values for temperature, motion, quantities, etc. 			

Name: _____

Date: _____