

MATH CONTENT STANDARD LEVEL 4: NUMBER SENSE AND OPERATIONS

Adult learners will develop and apply numbers 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
4.5.1 Add, subtract, multiply, and divide whole numbers, decimals, percentages, and fractions	<ul style="list-style-type: none"> • Apply basic math facts with proficiency. • Developing a number grid to master multiplication tables and use this to assist in division. • Use a calculator to add, subtract, multiply, and divide a long list of numbers to be used in grocery shopping, invoicing, etc. • Interchange common fractions and decimals (.25=25%=1/4) • Convert percentages to decimals (and vice versa) when applying discounts to store items. 			
4.5.2 Identify the proper sequence of the orders of operation	<ul style="list-style-type: none"> • Apply the correct order of operation using the tool: Please Excuse My Dear Aunt Sally (P-parenthesis, E-exponent, M-multiplication, D-division, A-add, and S-subtract). 			
4.5.3 Understand and use equivalent rate, ratios, and proportions.	<ul style="list-style-type: none"> • Determine the mixtures (50:1) when adding oil to gasoline. • Increase and decrease ingredients to keep mixtures in proper portions when mixing chemicals for baking, lawn care, etc. • Convert quantities such as feet per second, miles per hour, dollars per pound, and persons per square mile. • Solve simple proportion problems using unit rate, scaling, finding equivalent fractions, and solving the proportion equation $a/b=c/d$. 			
4.5.4 Understand derived quantities, such as: density, velocity, and weighted averages	<ul style="list-style-type: none"> • Calculate course grades, sports ratings, the average number of units per space unit, etc. 			