

OREGON EDUCATIONAL FUNCTIONING LEVEL DESCRIPTORS

ABE/GED Math

2009-2010

Descriptors

CASAS

Numeracy Standards, Numeracy Collection

**Oregon Educational Functioning Level Descriptors
ABE/GED Math**

Federal Ed Functioning Level	CASAS Math Score	Educational Functioning Level Descriptors
Beginning Literacy	200 and below	<p>Ability at the upper end of this level</p> <ol style="list-style-type: none"> 1. Can identify the numeracy task. 2. Uses a variety of problem solving strategies such as estimating, guessing and checking, making a model or diagram, or looking for a pattern and using a calculator to verify an estimate. 3. Evaluates to determine if an answer makes sense. 4. Recognizes and writes numbers up to 3 digits. 5. Adds and subtracts single digit numbers. 6. Recognizes, counts, converts, and uses coins and currency. 7. Identifies geometric figures such as circles, triangles, or polygons.
Beginning Basic	201-210	<p>Ability at the upper end of this level</p> <ol style="list-style-type: none"> 1. Can identify the numeracy task. 2. Uses a variety of problem solving strategies such as estimating, guessing and checking, working backwards, making a model or diagram, looking for a pattern, or using a calculator to verify an estimate. 3. Evaluates to determine if an answer make sense. 4. Recognizes various monetary amounts and identifies the place value. 5. Calculates a single simple operation when numbers are given. 6. Uses data to solve simple problems related to daily living, such as grocery shopping and computing travel distances. 7. Performs paper/pencil computations, building upon mental math skills form previous beginning literacy level. 8. Recognizes fractional quantities—half of the people in the room, measuring cups for cooking, ... 9. Reads measurement devices such as thermometers, clocks, rulers, odometers, or scales to identify simple quantities. 10. Defines and identifies simple measurement of units of length, weight, time, area and volume. Can recognize equivalent measurements (e.g., 12" is equal to 1'). 11. Substitutes/uses “unknowns” in familiar number sentences such as “I am thinking of a number that, when added to four, will equal twelve.”

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Low Intermediate	211-220	<p>Ability at the upper end of this level</p> <ol style="list-style-type: none"> 1. Can identify the numeracy task. 2. Uses a variety of problem solving strategies such as estimating, guessing and checking, working backwards, making a model or diagram, looking for a pattern, using a calculator to verify an estimate, and simplifying the problem using substitution. 3. Evaluates to determine if an answer makes sense. 4. Performs all four basic math operations with whole numbers with high accuracy. 5. Uses all basic math symbols (+, -, x, ÷, ≤, ≥, ≠). Can use mathematical notation to describe a problem. 6. Uses numerical representations instead of concrete objects to show decimal and fractional equivalents. 7. Creates simple charts and graphs from classroom survey data. 8. Performs computational tasks related to life roles such as calculating bank deposits, balancing a checkbook, and doing calculations on a simple order form. 9. Reads and extracts information from charts, graphs, tables, maps, and schedules. Examples include wage schedules, bus schedules, savings plans, bar and pie graphs, tables of mileage and gas consumption, and tax tables. 10. Estimates values between given points using common measurement devices such as thermometers, clocks, rulers, odometers, or scales. 11. Makes predictions of the probability of an event, such as a coin toss, rolling dice, the gender of an unborn child and winning the lottery. 12. Uses concrete objects or paper and pencil representation to illustrate ratio and proportion. 13. Computes perimeter, area, and volume, such as in determining square footage, amount of fencing, or capacity of coolers (using a single unit of measurement). 14. Interprets wages, deductions, benefits, and timekeeping forms. 15. Recognizes and uses patterns to make predictions such as the next number in a sequence. 16. Recognizes patterns of chance and probability such as coin tosses, rolling dice, gender of an unborn child or winning lotteries

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High Intermediate	221-235	<p>Ability at the upper end of this level</p> <ol style="list-style-type: none"> 1. Can identify the numeracy task. 2. Chooses the most appropriate/efficient problem solving strategies for a given situation, such as estimating, guessing and checking, working backwards, making a model or diagram, or looking for a pattern, using a calculator to verify an estimate and simplify the problem using substitution. 3. Performs multi-step computational tasks related to life roles. 4. Performs all four basic math operations with whole umbers and fractional equivalentents (decimals, percentages, and fractions). 5. Solves expressions containing exponents. 6. Translates life situations or narrative math problems into mathematical equations. 7. Interprets and uses graphs, spreadsheets, and charts to make decisions. 8. Uses proportional reasoning such as map distance scales or scaled drawings. 9. Creates charts and graphs from data sets (e.g., pie, line, or bar). 10. Reads specialized measurement devices such as micrometers and voltmeters with metric and uncommon units. 11. Applies formulas to compute perimeter, circumference, area, and volume, including cylinders (using a single unit of measurement). 12. Recognizes and uses patterns to make predictions, such as the next number in a sequence using whole numbers and fractional equivalentents. 13. Recognizes statistical analyses (mean, median, mode) based on charts, graphs, and data sets.

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Low Adult Secondary	236-245	<p>Ability at the upper end of this level</p> <ol style="list-style-type: none"> 1. Can identify the numeracy task. 2. Uses appropriate problem solving strategies. 3. Extrapolates quantities between values of given points using specialized measurement deices with metric and uncommon units such as micrometers and voltmeters. 4. Selects appropriate formulas to compute perimeter, circumference, area, and volume. 5. Gathers data and represents it using graphs, spreadsheets and charts. Makes predictions about trends and probabilities. 6. Applies math to personal finance and workplace settings, such as computing net pay as a percentage of gross. 7. Interprets and uses graphs, spreadsheets, and charts to make predictions such as in recognizing trends and probabilities and to make decisions. 8. Applies proportional reasoning (ratios) in calculations such as recipe conversion and fuel mixtures. 9. Creates, interprets, and solves simple algebraic expressions and equations. 10. Uses positive and negative numbers (as on a number line) to describe mathematical relationships and change, such as in altitude, temperature, stock market, and cash flow. 11. Selects and uses statistical analyses (mean, median, mode, etc.) to make predictions and decisions. 12. May pass the GED mathematics test.
High Adult Secondary	246 and above	<p>Ability at the upper end of this level</p> <ol style="list-style-type: none"> 1. Can identify the numeracy task. 2. Uses appropriate problem solving strategies. 3. Applies principles of geometry to measure angles, lines and surfaces. 4. Applies quantitative technical information from more complex manuals, and material safety data sheets (MSDS). 5. Can pass the GED mathematics test.