

**NEVADA'S  
CONTENT STANDARDS  
FOR  
ADULT SECONDARY EDUCATION**

**MATHEMATICS**

**For Northern Nevada Literacy Council**

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## Introduction

The purpose of the development of the Nevada State Low and High Adult Secondary Education (ASE) Content Standards is to provide integrated educational experiences that will prepare students for success by providing essential academic skills required for life and required to pass the official GED tests. These content standards cover the major areas of academic instruction in reading, writing, mathematics, social studies, and science.

Nevada's Low and High ASE Mathematics Content Standards consistently reflect the continuum of Nevada's k-12 Mathematics Standards which integrate problem solving, mathematical communication, mathematical reasoning, and mathematical connections in order to emphasize the importance of teaching mathematics within the context of an application so that students can not only compute but also can use their computational skills to reason and solve problems. Therefore, the context throughout the ASE Math Standards focuses on real world applications rather than mastery of isolated academic skills. It was also noted that GED mathematics tests procedural knowledge, conceptual understanding, and problem solving within the areas of number operations and number sense, measurement and geometry, data analysis, statistics and probability, and algebra functions and patterns.

The sequence of these mathematics standards includes both the low and high adult secondary education levels to accommodate instructors who may have combined levels in one class. Both levels of math are similarly organized: standards, indicators for each standard, suggested CASAS competencies that provide context for the standards and indicators, and customized program resources that have been aligned to the suggested CASAS competencies. CASAS competencies with an asterisk in front of the number indicate that the competency is tested in the CASAS assessments. Program resources in blue indicate that the program has resources. Program resources in red indicate that CASAS competency aligned resources were not found and, therefore, alternate resources were suggested.

## **NRS Low Adult Secondary Education Level 5    CASAS Advanced Adult Secondary Level D**

**CASAS scale scores: Reading: 236-245**  
**Writing: 261-270**  
**Math: 236-245**

**CASAS Assessments: LW 187, 188; ECS 17, 18; Functional Writing Assessment Picture Task, Forms 420 and 421**

**Secondary Assessments:** D 505 & 506 Math; D 507 & 508 Economics; D 509 & 510 American Government; D 511 & 512 United States History; D 513 & 514 English/Language Arts; D 515 & 516 World History; D 529 & 530 Biological Science; D 531 & 532 Physical Science

### **CASAS Skill Level Descriptors:**

**Reading:** Individuals at this level generally can perform tasks that involve written instructions in both familiar and unfamiliar situations. Other skills may include: reading and following multi-step directions; reading and interpreting manuals and legal forms; interpreting literary materials such as poetry and literature; creating and using tables and graphs; integrating information from multiple texts, charts, and graphs; evaluating and organizing information. They can also organize information and perform tasks that involve workplace communication skills.

**Writing:** Individuals at this level generally can perform writing tasks, such as most letters, logs, memos, and forms, with reasonable accuracy to meet most personal and employment-related needs. Other skills may include: taking notes from meetings and recorded messages; describing work or training procedures including basic safety directives, job aids, and maintenance instructions; stating personal and employment goals. Persons at this level generally are able to successfully complete the writing section of the Tests of General Educational Development (GED Tests).

**Math:** Individuals at this level generally can add, subtract, multiply, and divide whole numbers, fractions, and decimals. Other skills may include using mathematics in the workplace, such as calculating discounts; comparing prices to determine the best buys for goods and services; creating and using tables and graphs; computing standard measurement for length, width, perimeter, and area. They generally can organize, implement and perform multi-level calculations.

NOTE: GED Mathematics tests procedural knowledge, conceptual understanding, and problem solving within the areas of number operations and number sense, measurement and geometry, data analysis, statistics and probability, and algebra, functions, and patterns. The context is realistic rather than academic.

## MATHEMATICS STANDARD: Numbers

The student will, in situations familiar and unfamiliar, show the ability to represent, sequence, and perform operations using numbers, including positive and negative numbers, fractions, decimals, and percentages. Upon exiting the low adult secondary level, the student will:

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|---|--|--|
| <p><b>Locate and place positive and negative numbers on a number line</b></p> | <p><b>Consumer Economics</b><br/>*1.1.5 Interpret temperatures</p> <p><b>Computation</b><br/>*6.0.2 Count and associate numbers with quantities, including recognizing correct number sequencing</p> | <p><b>Consumer Economics</b><br/>*1.1.5 <i>Aztec Courseware, Aztec Adult Integrated Learning Series, Software, 1999, Ut 8, 10, 12.</i></p> <p><i>Workplace Essential Skills 1, Kentucky Educational Television/PBS, 2004, Seg 24.</i></p> <p><i>Math Sense: Comprehensive Math Review, New Readers Press, 2003, ISBN: 1-56420-385-9, Ut 4.</i></p> <p><b>Computation</b><br/>*6.0.2 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1.</i></p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|---|--|---|
| <p><b>Add, subtract, multiply, and divide positive and negative numbers</b></p> | <p><b>Computation</b><br/> *6.1.5 Perform multiple operations using whole numbers</p> <p>*6.2.5 Perform multiple operations using decimal fractions</p> <p>6.3.5 Perform multiple operations using common or mixed fractions</p> | <p><b>Computation</b><br/> *6.1.5 <i>Contemporary's GED Exercise Books: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</p> <p>*6.2.5 <i>Contemporary's GED Exercise Books: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</p> <p><i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 3.</p> <p>6.3.5 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 4.</p> |
| <p><b>Solve word problems involving integers</b></p>                            | <p><b>Consumer Economics</b><br/> 1.5.1 Interpret information about personal and family budgets</p>  | <p><b>Consumer Economics</b><br/> 1.5.1 <i>Putting More Money in Your Pocket and Managing Your Cash and Credit</i>, One Economy Corporation, Web Site, <a href="http://thebeehive.org/money">http://thebeehive.org/money</a>, 2005.</p> <p><i>Practical Math</i>, American Guidance Service, 1997, ISBN: 0-7854-0952-1, Ut 5.</p>   |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|---|---|--|
| <p><b>Continued: Solve word problems involving integers</b></p> | <p><b>Employment</b><br/> *4.2.1 Interpret wages, wage deductions, benefits, and timekeeping forms</p> <p><b>Government and Law</b><br/> 5.4.1 Interpret income tax forms</p> | <p><b>Employment</b><br/> *4.2.1 <i>2000 Families First Idea Book: Integrating Work Skills and Basic Skills</i>, Center for Literacy Studies, <a href="http://cls.coe.utk.edu/pdf/Idea_Book_2000.pdf">http://cls.coe.utk.edu/pdf/Idea_Book_2000.pdf</a>, 2005, Web Site, All.</p> <p><i>Math Sense: Whole Numbers and Money</i>, New Readers Press, 2003, ISBN: 1-56420-383-2, Ut 3.</p> <p><i>Number Sense: Decimals, Multiplication and Division</i>, McGraw-Hill/Contemporary, 2003, ISBN: 0-07287107-5, Ut 5.</p> <p><b>Government and Law</b><br/> 5.4.1 <i>Practical Math</i>, American Guidance Service, 1997, ISBN: 0-7854-0952-1, Ut 6.</p> <p><i>Workplace Essential Skills 1</i>, Kentucky Educational Television/PBS, 2004, Seg 17.</p> <p><i>Workplace Essential Skills 2</i>, Kentucky Educational Television/PBS, 2004, Seg 17.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|--|---|--|
| <p><b>Calculate the relative size of fractions</b></p>   | <p><b>Computation</b><br/> *6.0.2 Count and associate numbers with quantities, including recognizing correct number sequencing</p> <p><b>6.3.7</b> Identify or calculate equivalent fractions</p> | <p><b>Computation</b><br/> *6.0.2 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1.</p> <p><b>6.3.7</b> <i>Contemporary's GED Exercise Books: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</p>  |
| <p><b>Solve word problems that involve fractions</b></p>   | <p><b>Computation</b><br/> <b>6.3.5</b> Perform multiple operations using common or mixed fractions</p>   | <p><b>Computation</b><br/> <b>6.3.5</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 4.</p>   |
| <p><b>Perform multiple operations using common fractions, mixed numbers, and whole numbers</b></p> | <p><b>Computation</b><br/> *6.1.5 Perform multiple operations using whole numbers</p> <p>*6.2.5 Perform multiple operations using decimal fractions</p>   | <p><b>Computation</b><br/> *6.1.5 <i>Contemporary's GED Exercise Books: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</p> <p>*6.2.5 <i>Contemporary's GED Exercise Books: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</p> <p><i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 3.</p> <p>]</p> |



| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|--|--|---|
| <p><b>Multiply or divide a decimal by a whole number, a decimal by a decimal, or a whole number by a decimal</b></p> | <p><b>Computation</b><br/>*6.2.4 Divide decimal fractions</p>  | <p><b>Computation</b><br/>*6.2.4 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 3.</p>   |
| <p><b>Solve word problems that involve decimals</b></p>  | <p><b>Consumer Economics</b><br/>1.8.2 Interpret the procedures and forms associated with banking services, including writing checks</p> <p><b>Employment</b><br/>*4.2.1 Interpret wages, wage deductions, benefits, and timekeeping forms</p> | <p><b>Consumer Economics</b><br/>1.8.2 <i>Math for the World of Work</i>, American Guidance Service, 2002, ISBN: 0-7854-2688-1, Ch 5, 6.</p> <p><i>Practical Math</i>, American Guidance Service, 1997, ISBN: 0-7854-0952-1, Ut 1.</p> <p><i>Aztec Courseware</i>, Aztec Adult Integrated Learning Series, Software, 1999, Ut 11.</p> <p><b>Employment</b><br/>*4.2.1 <i>Math for the World of Work</i>, American Guidance Service, 2002, ISBN: 0-7854-2688-1, Ch 1, 2, 7.</p> <p><i>Practical Math</i>, American Guidance Service, 1997, ISBN: 0-7854-0952-1, Ut 2.</p> <p><i>Aztec Courseware</i>, Aztec Adult Integrated Learning Series, Software, 1999, Ut 11.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|--|--|--|
| <p><b>Solve word problems involving ratios and proportions (ex. calculate and compare the unit prices for different sizes of food containers and for different brands)</b></p> | <p><b>Consumer Economics</b><br/> <b>1.2.4</b> Compute unit pricing</p> <p><b>Health</b><br/> <b>3.5.1</b> Interpret nutritional and related information listed on food labels</p> | <p><b>Consumer Economics</b><br/> <b>1.2.4</b> <i>Aztec Courseware, Aztec Adult Integrated Learning Series, Software, 1999, Ut 6, 9, 10.</i></p> <p><i>Math Sense: Comprehensive Math Review, New Readers Press, 2003, ISBN: 1-56420-382-4, Ut 2.</i></p> <p><i>Number Sense: Ratio and Proportion, McGraw-Hill/Contemporary, 2003, ISBN: 0-07-287111-3, Ut 5, 6.</i></p> <p><b>Health</b><br/> <b>3.5.1</b> <i>Contemporary's GED: Science, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2230-2, Ch 8.</i></p> <p><i>Life Skills Health, American Guidance Service, 1999, ISBN: 0-7854-1862-8, Ut 3.</i></p> <p><i>Essentials of Reading, Book 6, McGraw-Hill/Contemporary, 2002, ISBN: 0-83590756-2, Ch 8.</i></p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|---|--|---|
| <p><b>Continued: Solve word problems involving ratios and proportions (ex. calculate and compare the unit prices for different sizes of food containers and for different brands)</b></p> | <p><b>Employment</b><br/> *4.2.1 Interpret wages, wage deductions, benefits, and timekeeping forms</p> <p><b>Computation</b><br/> *6.4.6 Compute using ratio or proportion</p> | <p><b>Employment</b><br/> *4.2.1 <i>Math for the World of Work</i>, American Guidance Service, 2002, ISBN: 0-7854-2688-1, Ch 1, 2, 7.</p> <p><i>Aztec Courseware</i>, Aztec Adult Integrated Learning Series, Software, 1999, Ut 11.</p> <p><i>Working Skills for a New Age</i>, Delmar Learning /Thomson, 2003, ISBN: 0-5386-9966-3, Ch 10.</p> <p><b>Computation</b><br/> *6.4.6 <i>Contemporary's GED Exercise Books: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</p> <p><i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 5.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|---|--|--|
| <p><b>Convert between fractions, decimals, and percents</b></p> | <p><b>Computation</b><br/> <b>6.3.6</b> Convert common or mixed fractions to decimal fractions or percents</p> <p><b>6.4.4</b> Convert percents to common, mixed, or decimal fractions</p> | <p><b>Computation</b><br/> <b>6.3.6</b> <i>GED Mathematics: Whole Numbers, Decimals, Fractions &amp; Percents</i>, New Readers Press, 2002, ISBN: 1-56420-437-5, Ch 9-11.</p> <p><i>Practical Math</i>, American Guidance Service, 1997, ISBN: 0-7854-0952-1, Ut 1, 6.</p> <p><i>Top 50 Math Skills for GED Success</i>, McGraw-Hill/Contemporary, 2004, ISBN: 0-0729-7383-8, All.</p> <p><b>6.4.4</b> <i>GED Mathematics: Whole Numbers, Decimals, Fractions &amp; Percents</i>, New Readers Press, 2002, ISBN: 1-56420-437-5, Ch 14.</p> <p><i>Math Sense: Comprehensive Math Review</i>, New Readers Press, Series, 2003, ISBN: 1-56420-385-9, Ut 3.</p> <p><i>Workplace Essential Skills 1</i>, Kentucky Educational Television/PBS, 2004, Seg 22.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|---|--|---|
| <p><b>Solve real-world problems involving percents, including determining the sales tax and total cost of a purchase based on the sales tax rate, computing discounts and sale prices, interpreting interest and interest earning savings plans, or calculating a finance charge.</b></p> | <p><b>Consumer Economics</b><br/> <b>1.8.3</b> Interpret interest or interest-earning savings plans</p> <p><b>Health</b><br/> <b>3.5.1</b> Interpret nutritional and related information listed on food labels</p> | <p><b>Consumer Economics</b><br/> <b>1.8.3</b> <i>Contemporary's GED: Complete GED</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-9469-9, Pt 5.</p> <p><i>Practical Math</i>, American Guidance Service, 1997, ISBN: 0-7854-0952-1, Ch 1, 6.</p> <p><i>Saving and Investing</i>, One Economy Corporation, 2005, Web Site, <a href="http://thebeehive.org/money">http://thebeehive.org/money</a>, All.</p> <p><b>Health</b><br/> <b>3.5.1</b> <i>Contemporary's GED: Science</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2230-2, Ch 8.</p> <p><i>Life Skills Health</i>, American Guidance Service, Text/Audio, 1999, ISBN: 0-7854-1862-8, Ut 3.</p> <p><i>Essentials of Reading, Book 6</i>, McGraw-Hill/Contemporary, Series, 2002, ISBN: 0-83590756-2, Ch 8.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|--|---|--|
| <p><b>Continued: Solve real-world problems involving percents, including determining the sales tax and total cost of a purchase based on the sales tax rate, computing discounts and sale prices, interpreting interest and interest earning savings plans, or calculating a finance charge.</b></p> | <p><b>Employment</b><br/> *4.2.1 Interpret wages, wage deductions, benefits, and timekeeping forms</p> <p><b>Government and Law</b><br/> 5.4.3 Interpret tax tables</p> | <p><b>Employment</b><br/> *4.2.1 <i>Math for the World of Work</i>, American Guidance Service, 2002, ISBN: 0-7854-2688-1, Ch 1, 2, 7.</p> <p><i>Math Sense: Whole Numbers and Money</i>, New Readers Press, 2003, ISBN: 1-56420-383-2, Ut 3.</p> <p><i>Number Sense: Decimals, Multiplication and Division</i>, McGraw-Hill/Contemporary, 2003, ISBN: 0-07287107-5, Ut 5.</p> <p><b>Government and Law</b><br/> 5.4.3 <i>Math for the Workplace Success</i>, EMB/Paradigm Publishing, 1991, ISBN: 1-56118-258-3, Ut 3.</p> <p><i>Consumer Math Success Kit: A Reproducible Book</i>, Walch Publishing, 1996, ISBN: 0-8251-2852-8, Ch 15.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|--|---|---|
| <p><b>Continued: Solve real-world problems involving percents, including determining the sales tax and total cost of a purchase based on the sales tax rate, computing discounts and sale prices, interpreting interest and interest earning savings plans, or calculating a finance charge.</b></p> | <p><b>Computation</b><br/> *6.4.1 Apply a percent to determine amount of discount</p> <p>*6.4.3 Calculate percents</p>  | <p><b>Computation</b><br/> *6.4.1 <i>GED Mathematics: Whole Numbers, Decimals, Fractions &amp; Percents</i>, New Readers Press, 2002, ISBN: 1-56420-437-5, Ch 14.</p> <p><i>Math Sense: Comprehensive Math Review</i>, New Readers Press, 2003, ISBN: 1-56420-385-9, Ut 3.</p> <p><i>Number Sense: Percent Applications</i>, McGraw-Hill/Contemporary, 2003, Ut 6.</p> <p>*6.4.3 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 6.</p> |
| <p><b>Solve simple problems by applying the algebraic order of operations</b></p>  | <p><b>Computation</b><br/> *6.0.4 Determine appropriate operation to apply to a given problem</p> <p>*6.5.3 Recognize and apply simple algebraic formulas</p> | <p><b>Computation</b><br/> *6.0.4 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1, 2.</p> <p>*6.5.3 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 10, 11.</p>   |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators | Program Resources   |
|--|--|---|
| <p><b>Estimate the square root of any whole number to the nearest whole number</b></p> | <p><b>Computation</b><br/> <b>6.1.3</b> Multiply whole numbers</p>           | <p><b>Computation</b><br/> <b>6.1.3</b> <i>Contemporary's GED: Complete GED</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-9469-9, Pt 5.</p> <p><i>GED Mathematics: Whole Numbers, Decimals, Fractions &amp; Percents</i>, New Readers Press, 2002, ISBN: 1-56420-437-5, Ch 7.</p> <p><i>Math Sense: Comprehensive Math Review</i>, 2003, ISBN: 1-56420-385-9, Ut 1.</p> |

## MATHEMATICS STANDARD: Algebra

The student will demonstrate proficiency in solving problems involving algebra. Upon exiting the low adult secondary level, the student will:

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|--|---|--|
| <p><b>Write algebraic expressions (e.g., <math>2x</math>, <math>2m - 10</math>)</b></p>      | <p><b>Computation</b><br/>           *6.5.3 Recognize and apply simple algebraic formulas</p>   | <p><b>Computation</b><br/>           *6.5.3 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 10, 11.</p>  |
| <p><b>Solve multi-operational equations involving any of the mathematical operations</b></p> | <p><b>Computation</b><br/>           *6.0.4 Determine appropriate operation to apply to a given problem</p> <p>*6.1.5 Perform multiple operations using whole numbers</p> | <p><b>Computation</b><br/>           *6.0.4 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1, 2.</p> <p>*6.1.5 <i>Contemporary's GED Exercise Books: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|---|---|---|
| <p><b>Solve word problems involving algebraic equations</b></p> | <p><b>Computation</b><br/> *6.0.4 Determine appropriate operation to apply to a given problem</p> <p>*6.5.3 Recognize and apply simple algebraic formulas</p> | <p><b>Computation</b><br/> *6.0.4 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1, 2.</i></p> <p>*6.5.3 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 10, 11.</i></p> |

## MATHEMATICS STANDARD: Geometry

The student will demonstrate proficiency in solving problems involving geometry. Upon exiting the low adult secondary level, the student will:

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|---|---|---|
| <p><b>Identify the basic properties of two and three-dimensional geometric shapes (e.g., circle, rectangle, cube)</b></p> | <p><b>Computation</b><br/>*6.6.2 Recognize, use, and measure linear dimensions, geometric shapes, or angles</p>   | <p><b>Computation</b><br/>*6.6.2 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</p>  |
| <p><b>Identify types of angles (acute, obtuse, straight, right, reflex)</b></p>   | <p><b>Consumer Economics</b><br/>1.1.4 Select, compute, or interpret appropriate standard measurement for length, width, perimeter, area, volume, height, or weight</p> <p><b>Computation</b><br/>*6.6.2 Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> | <p><b>Consumer Economics</b><br/>1.1.4 <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 1.</p> <p><i>Aztec Courseware</i>, Aztec Adult Integrated Learning Series, Software, 1999, Ut 8, 10, 12.</p> <p><i>Math Sense: Algebra and Geometry</i>, New Readers Press, 2003, ISBN: 1-56420-381-6, Ut 1, 4.</p> <p><b>Computation</b><br/>*6.6.2 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|---|--|---|
| <p><b>Recognize types of triangles (equilateral, right, scalene, isosceles)</b></p> | <p><b>Computation</b><br/> *6.6.2 Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> <p>*6.6.5 Interpret diagrams, illustrations, and scale drawings</p> | <p><b>Computation</b><br/> *6.6.2 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</i></p> <p>*6.6.5 <i>Number Sense: Ratio and Proportion, McGraw-Hill/Contemporary, 2003, ISBN: 0-07-287111-3, Ut 6.</i></p> <p><i>Workplace Essential Skills 1, Kentucky Educational Television/PBS, 2004, Seg 16, 18, 22, 23.</i></p> <p><i>Math Sense: Algebra and Geometry, New Readers Press, 2003, ISBN: 1-56420-381-6, Ut 4, 5.</i></p> |
| <p><b>Measure the number of degrees in a triangle and a quadrilateral</b></p>       | <p><b>Computation</b><br/> *6.6.2 Recognize, use, and measure linear dimensions, geometric shapes, or angles</p>   | <p><b>Computation</b><br/> *6.6.2 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</i></p>   |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|---|---|---|
| <p>Use appropriate geometric vocabulary to write a description of a figure or a picture composed of geometric figures (parallel, perpendicular, similar, congruent)</p> | <p><b>Consumer Economics</b><br/> <b>1.1.4</b> Select, compute, or interpret appropriate standard measurement for length, width, perimeter, area, volume, height, or weight</p> <p><b>Computation</b><br/> <b>*6.6.2</b> Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> | <p><b>Consumer Economics</b><br/> <b>1.1.4</b> <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 1.</p> <p><i>Number Sense: Ration and Proportion</i>, McGraw-Hill/Contemporary, 2003, ISBN: 0-07-287111-3, Ut 1-6.</p> <p><i>Math Sense: Algebra and Geometry</i>, New Readers Press, 2003, ISBN: 1-56420-381-6, Ut 1, 4.</p> <p><b>Computation</b><br/> <b>*6.6.2</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</p> |
| <p>Use geometric formulas for perimeter</p>   | <p><b>Computation</b><br/> <b>*6.5.2</b> Recognize and apply simple geometric formulas</p>  | <p><b>Computation</b><br/> <b>*6.5.2</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 9.</p>   |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|--|---|---|
| <p><b>Continued: Use geometric formulas for perimeter</b></p>  | <p><b>Computation</b><br/> *6.6.3 Measure area and volume of geometric shapes</p>   | <p><b>Computation</b><br/> *6.6.3 <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 5.</p> <p><i>Top 50 Math Skills for GED Success</i>, McGraw-Hill/Contemporary, 2004, ISBN: 0-07297383-8, All.</p> <p><i>Math Sense: Comprehensive Math Review</i>, New Readers Press, 2003, ISBN: 1-56420-385-9, Ut 5.</p>  |
| <p><b>Use geometric formulas for area, circumference, and the volume of three-dimensional shapes including cubes, rectangles, solids and cylinders</b></p> | <p><b>Computation</b><br/> *6.5.2 Recognize and apply simple geometric formulas</p> <p>*6.6.3 Measure area and volume of geometric shapes</p> | <p><b>Computation</b><br/> *6.5.2 <i>Contemporary's GED: Mathematics</i>, Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 9.</p> <p>*6.6.3 <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 5.</p> <p><i>Top 50 Math Skills for GED Success</i>, McGraw-Hill/Contemporary, 2004, ISBN: 0-07297383-8, All.</p> <p><i>Math Sense: Comprehensive Math Review</i>, New Readers Press, 2003, ISBN: 1-56420-385-9, Ut 5.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|---|---|--|
| <p><b>Apply geometric concepts (flips, slides, turns, enlargements, symmetry, reflections, similarity, perpendicular, parallel) for problem solving</b></p> | <p><b>Consumer Economics</b><br/> <b>1.1.4</b> Select, compute, or interpret appropriate standard measurement for length, width, perimeter, area, volume, height, or weight</p> <p><b>Computation</b><br/> <b>*6.6.2</b> Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> | <p><b>Consumer Economics</b><br/> <b>1.1.4</b> <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 1.</p> <p><i>Number Sense: Ratio and Proportion</i>, McGraw-Hill/Contemporary, 2003, ISBN: 0-07-287111-3, Ut 1-6.</p> <p><i>Math Sense: Algebra and Geometry</i>, New Readers Press, 2003, ISBN: 1-56420-381-6, Ut 1, 4.</p> <p><b>Computation</b><br/> <b>*6.6.2</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|--|---|---|
| <p><b>Solve word problems using a variety of geometric formulas for two and three dimensional shapes</b></p> | <p><b>Consumer Economics</b><br/> *1.1.2 Use the metric system</p> <p><b>1.1.4</b> Select, compute, or interpret appropriate standard measurement for length, width, perimeter, area, volume, height, or weight</p> | <p><b>Consumer Economics</b><br/> *1.1.2 <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 2.</p> <p><i>Workplace Essential Skills 1</i>, Kentucky Educational Television/PBS, 2004, Seg 23.</p> <p><i>Math Sense: Comprehensive Math Review</i>, New Readers Press, 2003, ISBN: 1-56420-385-9, Ut 3, 4.</p> <p><b>1.1.4</b> <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 1.</p> <p><i>Number Sense: Ratio and Proportion</i>, McGraw-Hill/Contemporary, 2003, ISBN: 0-07-287111-3, Ut 1-6.</p> <p><i>Math Sense: Algebra and Geometry</i>, New Readers Press, 2003, ISBN: 1-56420-381-6, Ut 1, 4.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|---|--|--|
| <p><b>Continued: Solve word problems using a variety of geometric formulas for two and three dimensional shapes</b></p> | <p><b>Computation</b><br/> *6.6.2 Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> <p>*6.6.3 Measure area and volume of geometric shapes</p> <p>*6.6.5 Interpret diagrams, illustrations, and scale drawings</p> | <p><b>Computation</b><br/> *6.6.2 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</p> <p>*6.6.3 <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 5.</p> <p><i>Top 50 Math Skills for GED Success</i>, McGraw-Hill/Contemporary, 2004, ISBN: 0-07297383-8, All.</p> <p><i>Math Sense: Comprehensive Math Review</i>, New Readers Press, 2003, ISBN: 1-56420-385-9, Ut 5.</p> <p>*6.6.5 <i>Number Sense: Ratio and Proportion</i>, McGraw-Hill/Contemporary, 2003, ISBN: 0-07-287111-3, Ut 6.</p> <p><i>Math Sense: Comprehensive Math Review</i>, New Readers Press, 2003, ISBN: 1-56420-385-9, Ut 5.</p> <p><i>Math Sense: Algebra and Geometry</i>, New Readers Press, 2003, ISBN: 1-56420-381-6, Ut 4, 5.</p> |

## MATHEMATICS STANDARD: Measurement

The student will choose and use appropriate units and instruments to measure length, weight, capacity, time and temperature. Upon exiting the low adult secondary level, the student will:

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|---|---|--|
| <p><b>Identify the measurement most appropriate for a given situation</b></p> | <p><b>Consumer Economics</b><br/> <b>1.1.4</b> Select, compute, or interpret appropriate standard measurement for length, width, perimeter, area, volume, height, or weight</p> <p><b>Computation</b><br/> <b>6.6.4</b> Use or interpret measurement instruments, such as rulers, scales, gauges, and dials</p> | <p><b>Consumer Economics</b><br/> <b>1.1.4</b> <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 1.</p> <p><i>Number Sense: Ratio and Proportion</i>, McGraw-Hill/Contemporary, 2003, ISBN: 0-07-287111-3, Ut 1-6.</p> <p><i>Math Sense: Algebra and Geometry</i>, New Readers Press, 2003, ISBN: 1-56420-381-6, Ut 1, 4.</p> <p><b>Computation</b><br/> <b>6.6.4</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|--|---|--|
| <p><b>Convert within the U.S. system of measures for length, weight, or capacity</b></p> | <p><b>Consumer Economics</b><br/> <b>1.1.4</b> Select, compute, or interpret appropriate standard measurement for length, width, perimeter, area, volume, height, or weight</p> <p><b>Computation</b><br/> <b>*6.6.1</b> Convert units of U.S. standard measurement and metric system</p> <p><b>*6.6.2</b> Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> | <p><b>Consumer Economics</b><br/> <b>1.1.4</b> <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 1.</p> <p><i>Number Sense: Ratio and Proportion</i>, McGraw-Hill/Contemporary, 2003, ISBN: 0-07-287111-3, Ut 1-6.</p> <p><i>Math Sense: Algebra and Geometry</i>, New Readers Press, 2003, ISBN: 1-56420-381-6, Ut 1, 4.</p> <p><b>Computation</b><br/> <b>*6.6.1</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7.</p> <p><b>*6.6.2</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|--|---|---|
| <p><b>Solve linear measurement problems with inches, feet or yards</b></p> | <p><b>Consumer Economics</b><br/> <b>1.1.4</b> Select, compute, or interpret appropriate standard measurement for length, width, perimeter, area, volume, height, or weight</p> <p><b>Computation</b><br/> <b>*6.6.2</b> Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> <p><b>6.6.4</b> Use or interpret measurement instruments, such as rulers, scales, gauges, and dials</p> | <p><b>Consumer Economics</b><br/> <b>1.1.4</b> <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 1.</p> <p><i>Number Sense: Ratio and Proportion</i>, McGraw-Hill/Contemporary, 2003, ISBN: 0-07-287111-3, Ut 1-6.</p> <p><i>Math Sense: Algebra and Geometry</i>, New Readers Press, 2003, ISBN: 1-56420-381-6, Ut 1, 4.</p> <p><b>Computation</b><br/> <b>*6.6.2</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</p> <p><b>6.6.4</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|---|---|--|
| <p><b>Solve capacity problems with cups, pints, quarts or gallons</b></p>           | <p><b>Consumer Economics</b><br/> <b>1.1.4</b> Select, compute, or interpret appropriate standard measurement for length, width, perimeter, area, volume, height, or weight</p> | <p><b>Consumer Economics</b><br/> <b>1.1.4</b> <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 1.</p> <p><i>Number Sense: Ratio and Proportion</i>, McGraw-Hill/Contemporary, 2003, ISBN: 0-07-287111-3, Ut 1-6.</p> <p><i>Math Sense: Algebra and Geometry</i>, New Readers Press, 2003, ISBN: 1-56420-381-6, Ut 1, 4</p> |
| <p><b>Identify metric units of measure for length, weight/mass, or capacity</b></p> | <p><b>Consumer Economics</b><br/> <b>*1.1.2</b> Use the metric system</p>   | <p><b>Consumer Economics</b><br/> <b>*1.1.2</b> <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 2.</p> <p><i>Workplace Essential Skills 1</i>, Kentucky Educational Television/PBS, 2004, Seg 23.</p> <p><i>Math Sense: Comprehensive Math Review</i>, New Readers Press, 2003, ISBN: 1-56420-385-9, Ut 3, 4.</p>          |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|--|--|---|
| <p><b>Continued: Identify metric units of measure for length, weight/mass, or capacity</b></p> | <p><b>Computation</b><br/> *6.6.2 Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> <p><b>6.6.4</b> Use or interpret measurement instruments, such as rulers, scales, gauges, and dials</p> | <p><b>Computation</b><br/> *6.6.2 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</p> <p><b>6.6.4</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7.</p>  |
| <p><b>Convert measurements within the metric system</b></p>                                    | <p><b>Consumer Economics</b><br/> *1.1.2 Use the metric system</p> <p><b>Computation</b><br/> *6.6.1 Convert units of U.S. standard measurement and metric system</p>  | <p><b>Consumer Economics</b><br/> *1.1.2 <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 2.</p> <p><i>Workplace Essential Skills 1</i>, Kentucky Educational Television/PBS, 2004, Seg 23.</p> <p><i>Math Sense: Comprehensive Math Review</i>, New Readers Press, 2003, ISBN: 1-56420-385-9, Ut 3, 4.</p> <p><b>Computation</b><br/> *6.6.1 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|---|--|--|
| <p><b>Solve problems involving units of measure and convert answers to a larger or small unit within either the metric or U.S. system</b></p> | <p><b>Consumer Economics</b><br/> *1.1.2 Use the metric system</p> <p><b>1.1.4</b> Select, compute, or interpret appropriate standard measurement for length, width, perimeter, area, volume, height, or weight</p> <p><b>Computation</b><br/> *6.6.1 Convert units of U.S. standard measurement and metric system</p> | <p><b>Consumer Economics</b><br/> *1.1.2 <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 2.</p> <p><i>Workplace Essential Skills 1</i>, Kentucky Educational Television/PBS, 2004, Seg 23.</p> <p><i>Math Sense: Comprehensive Math Review</i>, New Readers Press, 2003, ISBN: 1-56420-385-9, Ut 3, 4.</p> <p><b>1.1.4</b> <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 1.</p> <p><i>Number Sense: Ratio and Proportion</i>, McGraw-Hill/Contemporary, 2003, ISBN: 0-07-287111-3, Ut 1-6.</p> <p><i>Math Sense: Algebra and Geometry</i>, New Readers Press, 2003, ISBN: 1-56420-381-6, Ut 1, 4.</p> <p><b>Computation</b><br/> *6.6.1 <i>Contemporary's GED: Mathematics</i>, Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7.</p> |

## MATHEMATICS STANDARD: Estimation

The student will develop and apply number sense to solve a variety of real life problems and to determine if the results are reasonable. Upon exiting the low adult secondary level, the student will:

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|--|---|--|
| <p><b>Predict results and check reasonableness of data</b></p> | <p><b>Consumer Economics</b><br/> <b>1.5.1</b> Interpret information about personal and family budgets</p> <p><b>Computation</b><br/> <b>6.9.2</b> Estimate answers</p> | <p><b>Consumer Economics</b><br/> <b>1.5.1</b> <i>Putting More Money in Your Pocket and Managing Your Cash and Credit</i>, One Economy Corporation, Web Site, <a href="http://thebeehive.org/money">http://thebeehive.org/money</a>, 2005.</p> <p><i>Practical Math, Life Skills</i><br/>           American Guidance Service, 1997, ISBN: 0-7854-0952-1, Ut 5.</p> <p><i>Workplace Essential Skills 1</i>, Kentucky Educational Television/PBS, 2004, Seg 1, 2.</p> <p><b>Computation</b><br/> <b>6.9.2</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 1.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|--|---|--|
| <p><b>Solve word problems of length, perimeter, area, mass, volume, and capacity</b></p> | <p><b>Consumer Economics</b><br/> <b>1.1.4</b> Select, compute, or interpret appropriate standard measurement for length, width, perimeter, area, volume, height, or weight</p> <p><b>Computation</b><br/> <b>*6.0.4</b> Determine appropriate operation to apply to a given problem</p> <p><b>6.9.2</b> Estimate answers</p> | <p><b>Consumer Economics</b><br/> <b>1.1.4</b> <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 1.</p> <p><i>Number Sense: Ratio and Proportion</i>, McGraw-Hill/Contemporary, 2003, ISBN: 0-07-287111-3, Ut 1-6.</p> <p><i>Math Sense: Algebra and Geometry</i>, New Readers Press, 2003, ISBN: 1-56420-381-6, Ut 1, 4.</p> <p><b>Computation</b><br/> <b>*6.0.4</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1, 2.</p> <p><b>6.9.2</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 1.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators                                 | Program Resources  |
|---|--|--|
| <p><b>Solve word problems of money, time, and temperature</b></p> | <p><b>Consumer Economics</b><br/> *1.1.5 Interpret temperatures</p> <p><b>1.2.4</b> Compute unit pricing</p> | <p><b>Consumer Economics</b><br/> *1.1.5 <i>Aztec Courseware, Aztec Adult Integrated Learning Series, Software, 1999, Ut 8, 10, 12.</i></p> <p><i>Workplace Essential Skills 1, Kentucky Educational Television/PBS, 2004, Seg 24.</i></p> <p><i>Math Sense: Comprehensive Math Review, New Readers Press, 2003, ISBN: 1-56420-385-9, Ut 4.</i></p> <p><b>1.2.4</b> <i>Aztec Courseware, Aztec Adult Integrated Learning Series, Software, 1999, Ut 6, 9, 10.</i></p> <p><i>Math Sense: Comprehensive Math Review, New Readers Press, 2003, ISBN: 1-56420-382-4, Ut 2.</i></p> <p><i>Number Sense: Ratio and Proportion, McGraw-Hill/Contemporary, 2003, ISBN: 0-07-287111-3, Ut 5, 6.</i></p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|--|---|---|
| <p><b>Continued: Solve word problems of money, time, and temperature</b></p> | <p><b>Employment</b><br/> *4.2.1 Interpret wages, wage deductions, benefits, and timekeeping forms</p> <p><b>Government and Law</b><br/> 5.4.1 Interpret income tax forms</p> | <p><b>Employment</b><br/> *4.2.1 <i>Math for the World of Work</i>, American Guidance Service, 2002, ISBN: 0-7854-2688-1, Ch 1, 2, 7.</p> <p><i>Aztec Courseware</i>, Aztec Adult Integrated Learning Series, Software, 1999, Ut 11.</p> <p><i>Working Skills for a New Age</i>, Delmar Learning /Thomson, 2003, ISBN: 0-5386-9966-3, Ch 10.</p> <p><b>Government and Law</b><br/> 5.4.1 <i>Practical Math</i>, American Guidance Service, 1997, ISBN: 0-7854-0952-1, Ut 6.</p> <p><i>Workplace Essential Skills 1</i>, Kentucky Educational Television/PBS, 2004, Seg 17.</p> <p><i>Workplace Essential Skills 2</i>, Kentucky Educational Television/PBS, 2004, Seg 17.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|---|--|--|
| <p><b>Continued: Solve word problems of money, time, and temperature</b></p>  | <p><b>Computation</b><br/> *6.6.6 Calculate with units of time</p>   | <p><b>Computation</b><br/> *6.6.6 <i>Aztec Courseware, Aztec Adult Integrated Learning Series, Software, 1999, Ut 16.</i></p> <p><i>Workplace Essential Skills 1, Kentucky Educational Television/PBS, 2004, Seg 20, 22.</i></p> <p><i>Math Sense: Comprehensive Math Review, New Readers Press, 2003, ISBN: 1-56420-385-9, Ut 4.</i></p>                                    |
| <p><b>Use rounding techniques to estimate the solution to an addition or subtraction measurement word problem; then determine the actual result</b></p> | <p><b>Consumer Economics</b><br/> 1.1.4 Select, compute, or interpret appropriate standard measurement for length, width, perimeter, area, volume, height, or weight</p> | <p><b>Consumer Economics</b><br/> 1.1.4 <i>GED Mathematics: Measurement and Data Analysis, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 1.</i></p> <p><i>Number Sense: Ratio and Proportion, McGraw-Hill/Contemporary, 2003, ISBN: 0-07-287111-3, Ut 1-6.</i></p> <p><i>Math Sense: Algebra and Geometry, New Readers Press, 2003, ISBN: 1-56420-381-6, Ut 1, 4.</i></p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|---|--|--|
| <p><b>Continued: Use rounding techniques to estimate the solution to an addition or subtraction measurement word problem; then determine the actual result</b></p>                | <p><b>Computation</b><br/> *6.0.4 Determine appropriate operation to apply to a given problem</p> <p><b>6.6.4</b> Use or interpret measurement instruments, such as rulers, scales, gauges, and dials</p> <p><b>6.9.2</b> Estimate answers</p> | <p><b>Computation</b><br/> *6.0.4 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1, 2.</p> <p><b>6.6.4</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7.</p> <p><b>6.9.2</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 1.</p> |
| <p><b>Solve word problems by estimating measurements (length, time, weight/mass, temperature, money, perimeter, area and volume) in either U.S. system or in metric units</b></p> | <p><b>Consumer Economics</b><br/> *1.1.2 Use the metric system</p>   | <p><b>Consumer Economics</b><br/> *1.1.2 <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 2.</p> <p><i>Workplace Essential Skills 1</i>, Kentucky Educational Television/PBS, 2004, Seg 23.</p> <p><i>Math Sense: Comprehensive Math Review</i>, New Readers Press, 2003, ISBN: 1-56420-385-9, Ut 3, 4.</p>                       |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|--|---|---|
| <p><b>Continued: Solve word problems by estimating measurements (length, time, weight/mass, temperature, money, perimeter, area and volume) in either U.S. system or in metric units</b></p> | <p><b>Consumer Economics</b><br/> <b>1.1.4</b> Select, compute, or interpret appropriate standard measurement for length, width, perimeter, area, volume, height, or weight</p> <p><b>*1.1.5</b> Interpret temperatures</p> | <p><b>Consumer Economics</b><br/> <b>1.1.4</b> <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 1.</p> <p><i>Number Sense: Ratio and Proportion</i>, McGraw-Hill/Contemporary, 2003, ISBN: 0-07-287111-3, Ut 1-6.</p> <p><i>Math Sense: Algebra and Geometry</i>, New Readers Press, 2003, ISBN: 1-56420-381-6, Ut 1, 4.</p> <p><b>*1.1.5</b> <i>Aztec Courseware</i>, Aztec Adult Integrated Learning Series, Software, 1999, Ut 8, 10, 12.</p> <p><i>Workplace Essential Skills 1</i>, Kentucky Educational Television/PBS, 2004, Seg 24.</p> <p><i>Math Sense: Comprehensive Math Review</i>, New Readers Press, 2003, ISBN: 1-56420-385-9, Ut 4.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators                                      | Program Resources   |
|--|---|---|
| <p><b>Continued: Solve word problems by estimating measurements (length, time, weight/mass, temperature, money, perimeter, area and volume) in either U.S. system or in metric units</b></p> | <p><b>Computation</b><br/> *6.6.6 Calculate with units of time</p> <p><b>6.9.1</b> Use computation short cuts</p> | <p><b>Computation</b><br/> *6.6.6 <i>Aztec Courseware, Aztec Adult Integrated Learning Series, Software, 1999, Ut 16.</i></p> <p><i>Workplace Essential Skills 1, Kentucky Educational Television/PBS, 2004, Seg 20, 22.</i></p> <p><i>Math Sense: Comprehensive Math Review, New Readers Press, 2003, ISBN: 1-56420-385-9, Ut 4.</i></p> <p><b>6.9.1</b> <i>Number Sense: Decimals, Multiplication and Division, McGraw-Hill/Contemporary, 2003, ISBN: 0-07287107-5, Ut 4, 5.</i></p> <p><i>Workplace Essential Skills 1, Kentucky Educational Television/PBS, 2004, Seg 20, 22.</i></p> <p><i>Workplace Essential Skills 2, Kentucky Educational Television/PBS, 2004, Seg. 20, 22.</i></p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators | Program Resources   |
|--|--|---|
| <p><b>Continued: Solve word problems by estimating measurements (length, time, weight/mass, temperature, money, perimeter, area and volume) in either U.S. system or in metric units</b></p> | <p><b>Computation</b><br/> <b>6.9.2</b> Estimate answers</p>                 | <p><b>Computation</b><br/> <b>6.9.2</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 1.</p> |

## MATHEMATICS STANDARD: Graphs, Charts, and Maps

The student will use data to construct graphs, tables, charts, and maps and to determine mean and medium. Upon exiting the low adult secondary level, the student will:

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|---|--|--|
| <p><b>Choose and construct an appropriate graphic form to organize and represent data</b></p> | <p><b>Consumer Economics</b><br/> <b>1.1.3</b> Interpret maps and graphs</p> <p><b>Computation</b><br/> <b>*6.7.1</b> Interpret data given in a line graph</p> | <p><b>Consumer Economics</b><br/> <b>1.1.3</b> <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 9.</p> <p><i>Making Sense of Maps</i>, Web Site, <a href="http://historymatters.gmu.edu/mse/maps">http://historymatters.gmu.edu/mse/maps</a>, CUNY, 2005.</p> <p><i>Learning About Government</i>, American Guidance Service, 2000, ISBN: 0-7854-0961, Ut 3.</p> <p><b>Computation</b><br/> <b>*6.7.1</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 8.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|--|---|---|
| <p><b>Use data from charts and tables to solve word problems</b></p> | <p><b>Consumer Economics</b><br/> <b>1.8.3</b> Interpret interest or interest-earning savings plans</p> <p><b>Employment</b><br/> <b>*4.2.1</b> Interpret wages, wage deductions, benefits, and timekeeping forms</p> | <p><b>Consumer Economics</b><br/> <b>1.8.3</b> <i>Contemporary's GED: Complete GED</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-9469-9, Pt 5.</p> <p><i>Practical Math</i>, American Guidance Service, 1997, ISBN: 0-7854-0952-1, Ch 1, 6.</p> <p><i>Saving and Investing</i>, One Economy Corporation, 2005, Web Site, <a href="http://thebeehive.org/money">http://thebeehive.org/money</a>, All.</p> <p><b>Employment</b><br/> <b>*4.2.1</b> <i>Math for the World of Work</i>, American Guidance Service, 2002, ISBN: 0-7854-2688-1, Ch 1, 2, 7.</p> <p><i>Aztec Courseware</i>, Aztec Adult Integrated Learning Series, Software, 1999, Ut 11.</p> <p><i>Number Sense: Decimals, Multiplication and Division</i>, McGraw-Hill/Contemporary, 2003, ISBN: 0-07287107-5, Ut 5.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|---|--|---|
| <p><b>Continued: Use data from charts and tables to solve word problems</b></p> | <p><b>Government and Law</b><br/> <b>5.4.1</b> Interpret income tax forms</p> <p><b>Computation</b><br/> <b>*6.0.4</b> Determine appropriate operation to apply to a given problem</p> | <p><b>Government and Law</b><br/> <b>5.4.1</b> <i>Practical Math</i>, American Guidance Service, 1997, ISBN: 0-7854-0952-1, Ut 6.</p> <p><i>Workplace Essential Skills 1,2.</i> Kentucky Educational Television/PBS, 2004, Seg 17.</p> <p><b>Computation</b><br/> <b>*6.0.4</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1, 2.</p> |
| <p><b>Interpret and use mean and median</b></p>                                 | <p><b>Employment</b><br/> <b>*4.2.1</b> Interpret wages, wage deductions, benefits, and timekeeping forms.</p>   | <p><b>Employment</b><br/> <b>*4.2.1</b> <i>Math for the World of Work</i>, American Guidance Service, 2002, ISBN: 0-7854-2688-1, Ch 1, 2, 7.</p> <p><i>Aztec Courseware</i>, Aztec Adult Integrated Learning Series, Software, 1999, Ut 11.</p> <p><i>Working Skills for a New Age</i>, Delmar Learning /Thomson, 2003, ISBN: 0-5386-9966-3, Ch 10.</p>                                   |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|---|---|--|
| <b>Continued: Interpret and use mean and median</b> | <p><b>Computation</b><br/>*6.7.5 Compute averages, medians, or modes</p>  | <p><b>Computation</b><br/>*6.7.5 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1.</p>  |
| <b>Use a scale to measure distance on a map</b>     | <p><b>Consumer Economics</b><br/>1.1.3 Interpret maps and graphs</p> <p><b>Computation</b><br/>*6.6.2 Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> <p>6.6.4 Use or interpret measurement instruments, such as rulers, scales, gauges, and dials</p> | <p><b>Consumer Economics</b><br/>1.1.3 <i>GED Mathematics: Measurement and Data Analysis</i>, New Readers Press, 2002, ISBN: 1-56420-440-5, Ch 9.</p> <p><i>Making Sense of Maps</i>, Web Site, <a href="http://historymatters.gmu.edu/mse/maps">http://historymatters.gmu.edu/mse/maps</a>, CUNY, 2005.</p> <p><i>Learning About Government</i>, American Guidance Service, 2000, ISBN: 0-7854-0961, Ut 3.</p> <p><b>Computation</b><br/>*6.6.2 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</p> <p>6.6.4 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators | Program Resources   |
|--|--|---|
| <p><b>Interpret information from a time zone map</b></p> | <p><b>Computation</b><br/> *6.6.6 Calculate with units of time</p>           | <p><b>Computation</b><br/> *6.6.6 <i>Aztec Courseware, Aztec Adult Integrated Learning Series, Software, 1999, Ut 16.</i></p> <p><i>Workplace Essential Skills 1, Kentucky Educational Television/PBS, 2004, Seg 20, 22.</i></p> <p><i>Math Sense: Comprehensive Math Review, New Readers Press, 2003, ISBN: 1-56420-385-9, Ut 4.</i></p> |

## **NRS High Adult Secondary Education Level 6    CASAS Advanced Adult Secondary Level E**

**CASAS scale scores: Reading: 246 and above**  
**Writing: 271 and above**  
**Math: 246 and above**

**\*CASAS Assessments: LW 187, 188; ECS 17, 18; Functional Writing Assessment Picture Task, Forms 420 and 421**

**Secondary Assessments: D 505 & 506 Math; D 507 & 508 Economics; D 509 & 510 American Government; D 511 & 512 United States History; D 513 & 514 English/Language Arts; D 515 & 516 World History; D 529 & 530 Biological Science; D 531 & 532 Physical Science**

\*Passing the GED Test or High School Diploma are the only measures of level completion for High ASE Level 6.

### **CASAS Skill Level Descriptors:**

**Reading: Individuals functioning at this skill level are able to read most written material encountered in the workplace, including forms, work procedures, and personal manuals. They can interpret technical information, training materials, and some technical manuals. They can interpret computer-generated materials in the form of databases and spreadsheets. They can read articles on unfamiliar topics written in more complex language. They can comprehend some college textbooks and apprenticeship manuals.**

**Writing: Individuals at this level generally can perform writing tasks, such as most letters, logs, memos, and forms, with reasonable accuracy to meet most personal and employment-related needs. Other skills may include taking notes from meetings and recorded messages, describing work or training procedures including basic safety directives, job aids, and maintenance instructions, and stating personal and employment goals. Persons at this level generally are able to successfully complete the writing section of the tests of General Educational Development (GED).**

**Mathematics: Individuals functioning at skill level E are able to apply multi-step operations involving percents; apply proportion and ratio; use decimal time; apply formulas to determine volume; devise formulas. They can apply these skills to: compare quantities such as changes in sales and production totals; compare relative quantities of material resources used; interpret and record time in decimal format (e.g. 1.4 hours); calculate volume of material required or used in manufacturing or construction; devise algebraic formulas to facilitate calculations.**

NOTE: GED Mathematics tests procedural knowledge, conceptual understanding, and problem solving within the areas of number operations and number sense, measurement and geometry, data analysis, statistics and probability, and algebra, functions, and patterns. The context is realistic rather than academic.

## MATHEMATICS STANDARD: Numbers

The student will develop and apply number sense to solve a variety of real-life problems and to determine if the results are reasonable. Upon exiting the high adult secondary level, the student will:

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|---|---|--|
| <p><b>Develop concepts, number sense, and number relationships relating to integers and rational numbers (whole numbers, decimals, fractions); e.g. explain the meaning of absolute value, e.g., <math> -8  = 8</math>; use positive and negative exponents</b></p> | <p><b>Consumer Economics</b><br/> <b>1.8.3</b> Interpret interest or interest-earning savings plans</p> <p><b>Employment</b><br/> <b>*4.2.1</b> Interpret wages, wage deductions, benefits, and timekeeping forms</p> | <p><b>Consumer Economics</b><br/> <b>1.8.3</b> <i>Contemporary's GED. Complete GED.</i> Contemporary. 2002. ISBN: 0-8092-9469-9. Pt 5.</p> <p><i>Practical Math. Life Skills Mathematics.</i> American Guidance Service. 1997. ISBN: 0-7854-0952-1. Ut 1, 6.</p> <p><i>Number Sense: Percent Applications.</i> McGraw-Hill/Contemporary. 2003. ISBN: 0-07-287112-X. Ut 6.</p> <p><b>Employment</b><br/> <b>*4.2.1</b> <i>Aztec Courseware.</i> Aztec Software Associates. Multimedia. 1999. Ut 11.</p> |



| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|--|--|--|
| <p><b>Continued: Develop concepts, number sense, and number relationships relating to integers and rational numbers (whole numbers, decimals, fractions); e.g. explain the meaning of absolute value, e.g., <math> -8  = 8</math>; use positive and negative exponents</b></p> | <p><b>Computation</b><br/> *6.2.5 Perform multiple operations using decimal fractions</p> <p><b>6.3.5</b> Perform multiple operations using common or mixed fractions</p> <p><b>Learning to Learn</b><br/> 7.2.1 Identify and paraphrase pertinent information</p> | <p><b>Computation</b><br/> *6.2.5 <i>Contemporary's GED Exercise Books: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</p> <p><i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 3.</p> <p><b>6.3.5</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 4.</p> <p><b>Learning to Learn</b><br/> 7.2.1 <i>Contemporary's GED: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. Ch 2.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED: Language Arts/Reading</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2231-0. Ch 1.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|--|--|--|
| <p><b>Continued: Develop concepts, number sense, and number relationships relating to integers and rational numbers (whole numbers, decimals, fractions); e.g. explain the meaning of absolute value, e.g., <math> -8  = 8</math>; use positive and negative exponents</b></p> | <p><b>Learning to Learn</b><br/> <b>7.2.2</b> Analyze a situation, statement, or process, identifying component elements and causal and part/whole relationships</p> | <p><b>Learning to Learn</b><br/> <b>7.2.2</b> <i>Contemporary's GED: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. Ch 1, 3.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> |
| <p><b>Select and use appropriate techniques while solving problems</b></p>   | <p><b>Computation</b><br/> <b>*6.0.4</b> Determine appropriate operation to apply to a given problem</p> <p><b>6.9.2</b> Estimate answers</p>                        | <p><b>Computation</b><br/> <b>*6.0.4</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1, 2.</p> <p><b>6.9.2</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 1.</p>   |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|---|--|--|
| <p><b>Continued: Select and use appropriate techniques while solving problems</b></p> | <p><b>Learning to Learn</b><br/> <b>7.3.4</b> Utilize problem solving strategies, such as breaking down the problem into component parts and generating alternative or creative solutions</p> <p><b>7.4.7</b> Identify or utilize test-taking skills</p> | <p><b>Learning to Learn</b><br/> <b>7.3.4</b> <i>Contemporary's GED Exercise Books: Science.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2235-3. All.</p> <p><i>Contemporary's GED Exercise Books: Social Studies,</i> McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> <p><b>7.4.7</b> <i>Contemporary's GED: Mathematics,</i> McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, All.</p> <p><i>Contemporary's GED: Science.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. All.</p> <p><i>Contemporary's GED: Social Studies.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2229-9. All.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|---|--|---|
| <p><b>Determine the reasonableness of results</b></p> | <p><b>Employment</b><br/> *4.4.6 Interpret work specifications and quality standards</p> <p><b>Computation</b><br/> 6.5.4 Recognize and evaluate logical statements</p> <p>6.9.2 Estimate answers</p> <p><b>Learning to Learn</b><br/> 7.2.5 Evaluate a situation, statement, or process, assembling information and providing evidence, making judgments, examining assumptions, and identifying contradictions</p> | <p><b>Employment</b><br/> *4.4.6 <i>Transition and Life Skills: Workplace Language Transition and Life.</i> Piney Mountain Press. Inc. Software. 2000. All.</p> <p><i>Workplace Essential Skills 1.</i> KT Kentucky Educational Television/PBS Multimedia. 2004. Seg 8, 9, 22.</p> <p><b>Computation</b><br/> 6.5.4 <i>Contemporary's GED: Mathematics,</i> McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 11.</p> <p>6.9.2 <i>Contemporary's GED: Mathematics,</i> McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 1.</p> <p><b>Learning to Learn</b><br/> 7.2.5 <i>Contemporary's GED Exercise Books: Science.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2235-3. All.</p> <p><i>Contemporary's GED: Social Studies.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2229-9. Ch 3, 4.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|---|---|---|
| <p><b>Compare and contrast the real number system and its various subsystems with regard to their structural characteristics, e.g. classify numbers as members of the sets (natural, whole, integers, rational, and irrational); compare subsets of the real number system with regard to their properties (commutative, associative, distributive, identity, inverse and closure properties)</b></p> | <p><b>Computation</b><br/> *6.0.2 Count and associate numbers with quantities, including recognizing correct number sequencing</p> <p>*6.7.1 Interpret data given in a line graph</p> <p><b>Learning to Learn</b><br/> 7.2.2 Analyze a situation, statement, or process, identifying component elements and causal and part/whole relationships</p> | <p><b>Computation</b><br/> *6.0.2 <i>Contemporary's GED:Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1.</p> <p>*6.7.1 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 8.</p> <p><b>Learning to Learn</b><br/> 7.2.2 <i>Contemporary's GED: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. Ch 1, 3.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|--|--|---|
| <p><b>Continued: Compare and contrast the real number system and its various subsystems with regard to their structural characteristics, e.g. classify numbers as members of the sets (natural, whole, integers, rational, and irrational); compare subsets of the real number system with regard to their properties (commutative, associative, distributive, identity, inverse and closure properties)</b></p> | <p><b>Learning to Learn</b><br/> <b>7.2.3</b> Make comparisons, differentiating among, sorting, and classifying items, information, or ideas</p> | <p><b>Learning to Learn</b><br/> <b>7.2.3</b> <i>Contemporary's GED Exercise Books: Science.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2235-3. All.</p> <p><i>Contemporary's GED Exercise Books: Social Studies,</i> McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> |
| <p><b>Solve a variety of word problems within real world applications involving integers and rational numbers (whole numbers, decimals, fractions)</b></p>   | <p><b>Consumer Economics</b><br/> <b>1.2.4</b> Compute unit pricing</p>  | <p><b>Consumer Economics</b><br/> <b>1.2.4</b> <i>Aztec Courseware.</i> Aztec Software Associates. Multimedia. 1999. Ut 6, 9, 10.</p> <p><i>Number Sense: Ratio and Proportion.</i> McGraw-Hill/Contemporary. 2003. ISBN: 0-07-287111-3. Ut 5, 6.</p> <p><i>Workplace Essential Skills 1.</i> KT Kentucky Educational Television/PBS Multimedia. 2004. Seg 21.</p>  |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|---|--|---|
| <p><b>Continued: Solve a variety of word problems within real world applications involving integers and rational numbers (whole numbers, decimals, fractions)</b></p> | <p><b>Consumer Economics</b><br/> <b>1.8.3</b> Interpret interest or interest-earning savings plans</p> <p><b>Employment</b><br/> <b>*4.4.6</b> Interpret work specifications and quality standards</p> <p><b>Computation</b><br/> <b>*6.5.1</b> Recognize and evaluate simple consumer formulas</p> | <p><b>Consumer Economics</b><br/> <b>1.8.3</b> <i>Contemporary's GED. Complete GED.</i> Contemporary. 2002. ISBN: 0-8092-9469-9. Pt 5.</p> <p><i>Practical Math. Life Skills Mathematics.</i> American Guidance Service. 1997. ISBN: 0-7854-0952-1. Ut 1, 6.</p> <p><i>Number Sense: Percent Applications.</i> McGraw-Hill/Contemporary. 2003. ISBN: 0-07-287112-X. Ut 6.</p> <p><b>Employment</b><br/> <b>*4.4.6</b> <i>Transition and Life Skills: Workplace Language Transition and Life.</i> Piney Mountain Press. Inc. Software. 2000. All.</p> <p><i>Workplace Essential Skills 1.</i> KT Kentucky Educational Television/PBS Multimedia. 2004. Seg 8, 9, 22.</p> <p><b>Computation</b><br/> <b>*6.5.1</b> <i>Contemporary's GED: Mathematics.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2232-9. Ch 2.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators                | Program Resources   |
|---|---|---|
| <p><b>Continued: Solve a variety of word problems within real world applications involving integers and rational numbers (whole numbers, decimals, fractions)</b></p> | <p><b>Computation</b><br/> *6.6.5 Interpret diagrams, illustrations, and scale drawings</p> | <p><b>Computation</b><br/> *6.6.5 <i>Aztec Courseware. Aztec Software Associates. Multimedia. 1999. Ut 16.</i></p> <p><i>Workplace Essential Skills 1. Kentucky Educational Television/PBS Multimedia. 2004. Seg 16, 18, 22.</i></p> <p><i>Math Exercises: Measurement. Contemporary. 1994. ISBN: 0-8092-0751-6. All.</i></p> |

## MATHEMATICS STANDARD: Algebra

The student will apply algebraic concepts and methods to explore, analyze or solve real life problems. Upon exiting the high adult secondary level, the student will:

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|--|--|---|
| <p><b>Identify the relationship between two variables using a table, equation, graph, and matrix</b></p> | <p><b>Consumer Economics</b><br/> <b>1.1.3</b> Interpret maps and graphs</p> <p><b>Computation</b><br/> <b>*6.7.1</b> Interpret data given in a line graph</p> <p><b>6.7.2</b> Interpret data given in a bar graph</p> | <p><b>Consumer Economics</b><br/> <b>1.1.3</b> <i>GED Scoreboost. Thinking Skills: Graphic Skills for Social Studies and Science.</i> New Readers Press. 2002. ISBN: 1-56420-445-6. Ch 9-11.</p> <p><i>Math Exercises: Algebra.</i> Contemporary. 1994. ISBN: 0-8092-0751-6. All.</p> <p><i>Number Sense: Percent Applications.</i> McGraw-Hill/Contemporary. 2003. ISBN: 0-07-287112-X. Ut 2, 6.</p> <p><b>Computation</b><br/> <b>*6.7.1</b> <i>Contemporary's GED: Mathematics,</i> McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 8.</p> <p><b>6.7.2</b> <i>Contemporary's GED: Mathematics.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2232-9. Ch 8.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|---|---|---|
| <p><b>Continued: Identify the relationship between two variables using a table, equation, graph, and matrix</b></p> | <p><b>Computation</b><br/>6.7.4 Interpret data given in a circle graph</p> <p><b>Learning to Learn</b><br/>7.2.2 Analyze a situation, statement, or process, identifying component elements and causal and part/whole relationships</p> | <p><b>Computation</b><br/>6.7.4 <i>Contemporary's GED: Mathematics</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2232-9. Ch 8.</p> <p><b>Learning to Learn</b><br/>7.2.2 <i>Contemporary's GED: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. Ch 1, 3.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> |
| <p><b>Identify the relationship suggested by two or more graphs of related real-world situations</b></p>            | <p><b>Computation</b><br/>*6.7.1 Interpret data given in a line graph</p>   | <p><b>Computation</b><br/>*6.7.1 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 8.</p>  |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|---|---|--|
| <p><b>Continued: Identify the relationship suggested by two or more graphs of related real-world situations</b></p> | <p><b>Computation</b><br/> <b>6.7.2</b> Interpret data given in a bar graph</p> <p><b>6.7.4</b> Interpret data given in a circle graph</p> <p><b>Learning to Learn</b><br/> <b>7.2.2</b> Analyze a situation, statement, or process, identifying component elements and causal and part/whole relationships</p> | <p><b>Computation</b><br/> <b>6.7.2</b> <i>Contemporary's GED: Mathematics.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2232-9. Ch 8.</p> <p><b>6.7.4</b> <i>Contemporary's GED: Mathematics.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2232-9. Ch 8.</p> <p><b>Learning to Learn</b><br/> <b>7.2.2</b> <i>Contemporary's GED: Science.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. Ch 1, 3.</p> <p><i>Contemporary's GED Exercise Books: Social Studies,</i> McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|--|--|---|
| <p><b>Graph a linear equation and a linear inequality in two variables</b></p> | <p><b>Computation</b><br/> *6.5.3 Recognize and apply simple algebraic formulas</p> <p>*6.7.1 Interpret data given in a line graph</p> | <p><b>Computation</b><br/> *6.5.3 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 10, 11.</i></p> <p>*6.7.1 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 8.</i></p> |
| <p><b>Determine slope and intercepts of a linear equation</b></p>              | <p><b>Computation</b><br/> *6.5.3 Recognize and apply simple algebraic formulas</p> <p>*6.7.1 Interpret data given in a line graph</p> | <p><b>Computation</b><br/> *6.5.3 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 10, 11.</i></p> <p>*6.7.1 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 8.</i></p> |
| <p><b>Solve linear equations and inequalities in one variable</b></p>          | <p><b>Computation</b><br/> *6.1.5 Perform multiple operations using whole numbers</p>  | <p><b>Computation</b><br/> *6.1.5 <i>Contemporary's GED Exercise Books: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</i></p>  |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|---|---|---|
| <p><b>Continued: Solve linear equations and inequalities in one variable</b></p>                                | <p><b>Computation</b><br/> *6.2.5 Perform multiple operations using decimal fractions</p> <p><b>6.3.5</b> Perform multiple operations using common or mixed fractions</p> <p>*6.5.3 Recognize and apply simple algebraic formulas</p> | <p><b>Computation</b><br/> *6.2.5 <i>Contemporary's GED Exercise Books: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</p> <p><i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 3.</p> <p><b>6.3.5</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 4.</p> <p>*6.5.3 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 10, 11.</p> |
| <p><b>Determine from two linear equations whether the lines are parallel, are perpendicular or coincide</b></p> | <p><b>Computation</b><br/> *6.5.3 Recognize and apply simple algebraic formulas</p> <p>*6.7.1 Interpret data given in a line graph</p>  | <p><b>Computation</b><br/> *6.5.3 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 10, 11.</p> <p>*6.7.1 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 8.</p>   |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|--|--|---|
| <p><b>Solve systems of linear equations in two variables</b></p> | <p><b>Computation</b><br/> *6.1.5 Perform multiple operations using whole numbers</p> <p>*6.2.5 Perform multiple operations using decimal fractions</p> <p>6.3.5 Perform multiple operations using common or mixed fractions</p> <p>*6.5.3 Recognize and apply simple algebraic formulas</p> | <p><b>Computation</b><br/> *6.1.5 <i>Contemporary's GED Exercise Books: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</p> <p>*6.2.5 <i>Contemporary's GED Exercise Books: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</p> <p><i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 3.</p> <p>6.3.5 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 4.</p> <p>*6.5.3 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 10, 11.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|---|--|---|
| <p><b>Perform mathematical operations on expressions and matrices, and solve equations and inequalities</b></p> | <p><b>Computation</b><br/> *6.0.4 Determine appropriate operation to apply to a given problem</p> <p>*6.1.5 Perform multiple operations using whole numbers</p> <p>*6.2.5 Perform multiple operations using decimal fractions</p> <p>6.3.5 Perform multiple operations using common or mixed fractions</p> | <p><b>Computation</b><br/> *6.0.4 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1, 2.</p> <p>*6.1.5 <i>Contemporary's GED Exercise Books: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</p> <p>*6.2.5 <i>Contemporary's GED Exercise Books: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</p> <p><i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 3.</p> <p>6.3.5 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 4.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|--|---|--|
| <p><b>Simplify numerical expressions using the order of operations including exponents</b></p> | <p><b>Computation</b><br/> *6.0.4 Determine appropriate operation to apply to a given problem</p> <p>*6.1.5 Perform multiple operations using whole numbers</p> <p>*6.2.5 Perform multiple operations using decimal fractions</p> <p><b>6.3.5</b> Perform multiple operations using common or mixed fractions</p> <p>*6.5.3 Recognize and apply simple algebraic formulas</p> | <p><b>Computation</b><br/> *6.0.4 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1, 2.</p> <p>*6.1.5 <i>Contemporary's GED Exercise Books: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</p> <p>*6.2.5 <i>Contemporary's GED Exercise Books: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</p> <p><i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 3.</p> <p><b>6.3.5</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 4.</p> <p>*6.5.3 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 10, 11.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|---|--|---|
| <p><b>Apply trigonometry to real-life problem situations (e.g., find the distance across the river using similar triangles and trigonometric ratios; compare the sine and cosine curves to the curves of sound waves and tide variations)</b></p> | <p><b>Computation</b><br/> *6.0.4 Determine appropriate operation to apply to a given problem</p> <p>*6.6.2 Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> <p>*6.6.7 Solve measurement problems in stipulated situations</p> | <p><b>Computation</b><br/> *6.0.4 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1, 2.</p> <p>*6.6.2 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</p> <p>*6.6.7 <i>Math Exercises: Measurement. Contemporary. 1996.</i> ISBN: 0-8092-0751-6. All.</p> <p><i>Workplace Essential Skills 1.</i> Kentucky Educational Television/PBS Multimedia. 2004. Seg 18, 20. 23.</p> <p><i>JSEP Plus: Industry Applied Skills.</i> Invest Learning. Software. 1996. All.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|--|--|--|
| <p><b>Solve simple right-triangle trigonometric equations involving sine, cosine and tangent</b></p>                 | <p><b>Computation</b><br/> *6.0.4 Determine appropriate operation to apply to a given problem</p> <p>*6.6.2 Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> | <p><b>Computation</b><br/> *6.0.4 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1, 2.</i></p> <p>*6.6.2 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</i></p>            |
| <p><b>Simplify square roots and cube roots with monomial radicands that are perfect squares or perfect cubes</b></p> | <p><b>Computation</b><br/> *6.0.4 Determine appropriate operation to apply to a given problem</p> <p>*6.1.5 Perform multiple operations using whole numbers</p>                            | <p><b>Computation</b><br/> *6.0.4 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1, 2.</i></p> <p>*6.1.5 <i>Contemporary's GED Exercise Books: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</i></p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|---|---|---|
| <p><b>Continued: Simplify square roots and cube roots with monomial radicands that are perfect squares or perfect cubes</b></p> | <p><b>Computation</b><br/> *6.2.5 Perform multiple operations using decimal fractions</p> <p><b>6.3.5</b> Perform multiple operations using common or mixed fractions</p> | <p><b>Computation</b><br/> *6.2.5 <i>Contemporary's GED Exercise Books: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</p> <p><i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 3.</p> <p><b>6.3.5</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 4.</p> |
| <p><b>Solve quadratic equations</b></p>   | <p><b>Computation</b><br/> *6.0.4 Determine appropriate operation to apply to a given problem</p> <p>*6.5.3 Recognize and apply simple algebraic formulas</p>             | <p><b>Computation</b><br/> *6.0.4 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1, 2.</p> <p>*6.5.3 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 10, 11.</p>   |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|--|---|--|
| <p><b>Solve radical equations involving one radical</b></p>                  | <p><b>Computation</b><br/> *6.0.4 Determine appropriate operation to apply to a given problem</p> <p>*6.5.3 Recognize and apply simple algebraic formulas</p> | <p><b>Computation</b><br/> *6.0.4 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1, 2.</i></p> <p>*6.5.3 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 10, 11.</i></p>  |
| <p><b>Solve proportions which generate linear or quadratic equations</b></p> | <p><b>Computation</b><br/> *6.0.4 Determine appropriate operation to apply to a given problem</p> <p>*6.4.6 Compute using ratio or proportion</p>             | <p><b>Computation</b><br/> *6.0.4 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1, 2.</i></p> <p>*6.4.6 <i>Contemporary's GED Exercise Books: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2237-X, All.</i></p> <p><i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 5.</i></p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|--|---|---|
| <p><b>Continued: Solve proportions which generate linear or quadratic equations</b></p>    | <p><b>Computation</b><br/> *6.5.3 Recognize and apply simple algebraic formulas</p>   | <p><b>Computation</b><br/> *6.5.3 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 10, 11.</i></p>   |
| <p><b>Solve absolute value equations containing a single absolute value expression</b></p> | <p><b>Computation</b><br/> *6.0.4 Determine appropriate operation to apply to a given problem</p> <p>*6.5.3 Recognize and apply simple algebraic formulas</p> | <p><b>Computation</b><br/> *6.0.4 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 1, 2.</i></p> <p>*6.5.3 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 10, 11.</i></p>   |
| <p><b>Multiply and divide monomial expressions with integer exponents</b></p>              | <p><b>Computation</b><br/> 6.1.3 Multiply whole numbers</p>   | <p><b>Computation</b><br/> 6.1.3 <i>Contemporary's GED. Complete GED. Contemporary. 2002. ISBN: 0-8092-9469-9. Pt 5.</i></p> <p><i>Number Power: Calculator Power for the GED. McGraw-Hill/Contemporary. 2000. ISBN: 0-07-251697-6. Ch 1.</i></p> <p><i>Workplace Essential Skills 1. Kentucky Educational Television/PBS Multimedia. 2004. Seg 20, 21, 23.</i></p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators | Program Resources  |
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| <p><b>Continued: Multiply and divide monomial expressions with integer exponents</b></p> | <p><b>Computation</b><br/> <b>6.3.4</b> Divide common or whole fractions</p> | <p><b>Computation</b><br/> <b>6.3.4</b> <i>Contemporary's GED: Mathematics</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2232-9. Ch 4.</p> |

## MATHEMATICS STANDARD: Geometry and Measurement

The student will apply geometric properties, relationships, and methods to identify, analyze and solve real-life problems. Upon exiting the high adult secondary level, the student will:

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|--|--|--|
| <p><b>Interpret three-dimensional objects, e.g. classify prisms, pyramids, cones, cylinders and spheres by base shape, lateral surface shape, related surface area and volume formulas</b></p> | <p><b>Computation</b><br/> *6.6.2 Recognize, use, and measure linear dimensions, geometric shapes, or angles</p>   | <p><b>Computation</b><br/> *6.6.2 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</p>  |
| <p><b>Calculate surface areas and volumes of three-dimensional geometric figures given the required formulas</b></p>   | <p><b>Consumer Economics</b><br/> 1.1.4 Select, compute, or interpret appropriate standard measurement for length, width, perimeter, area, volume, height, or weight</p> | <p><b>Consumer Economics</b><br/> 1.1.4 <i>Math Exercises: Measurement. Contemporary. 1994. ISBN: 0-8092-0751-6. All.</i></p> <p><i>Aztec Courseware. Aztec Software Associates. Multimedia. 1999. Ut 8,10,12</i></p> <p><i>Number Power 4: Geometry. McGraw-Hill/Contemporary. 2000. ISBN: 0-8092-2382-1. P 80-159.</i></p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|--|---|--|
| <p><b>Continued: Calculate surface areas and volumes of three-dimensional geometric figures given the required formulas</b></p>                        | <p><b>Employment</b><br/>*4.4.6 Interpret work specifications and quality standards</p> <p><b>Computation</b><br/>*6.6.2 Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> | <p><b>Employment</b><br/>*4.4.6 <i>Transition and Life Skills: Workplace Language Transition and Life.</i> Piney Mountain Press. Inc. Software. 2000. All.</p> <p><i>Workplace Essential Skills 1.</i> KT Kentucky Educational Television/PBS Multimedia. 2004. Seg 8, 9, 22.</p> <p><b>Computation</b><br/>*6.6.2 <i>Contemporary's GED: Mathematics,</i> McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</p> |
| <p><b>Compare and contrast geometric shapes and designs using a given attribute (e.g., height, area, perimeter, diagonals, angle measurements)</b></p> | <p><b>Computation</b><br/>*6.6.2 Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> <p>*6.6.5 Interpret diagrams, illustrations, and scale drawings</p>                     | <p><b>Computation</b><br/>*6.6.2 <i>Contemporary's GED: Mathematics,</i> McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</p> <p>*6.6.5 <i>Aztec Courseware.</i> Aztec Software Associates. Multimedia. 1999. Ut 16.</p> <p><i>Math Exercises: Measurement.</i> Contemporary. 1994. ISBN: 0-8092-0751-6. All.</p>   |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
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| <p><b>Verify characteristics of a given geometric figure using coordinate formulas such as distance, mid-point, and slope to confirm parallelism, perpendicularity, and congruency</b></p> | <p><b>Computation</b><br/> *6.5.2 Recognize and apply simple geometric formulas</p> <p>*6.6.2 Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> | <p><b>Computation</b><br/> *6.5.2 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 9.</i></p> <p>*6.6.2 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</i></p>   |
| <p><b>Determine whether a figure is symmetric with respect to a line or a point</b></p>  | <p><b>Computation</b><br/> *6.6.2 Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> <p>*6.6.3 Measure area and volume of geometric shapes</p>   | <p><b>Computation</b><br/> *6.6.2 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</i></p> <p>*6.6.3 <i>Number Power: Calculator Power for the GED. McGraw-Hill/Contemporary. 2000. ISBN: 0-07-251697-6. Ch 3.</i></p> <p><i>Workplace Essential Skills 1. Kentucky Educational Television/PBS Multimedia. 2004. Seg 23.</i></p> <p><i>Math Exercises: Measurement. Contemporary. 1994. ISBN: 0-8092-0751-6. All.</i></p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|---|---|---|
| <p><b>Determine the effects of a transformation on linear and area measurements of the original figure</b></p>          | <p><b>Computation</b><br/> *6.5.2 Recognize and apply simple geometric formulas</p> <p>*6.6.3 Measure area and volume of geometric shapes</p> | <p><b>Computation</b><br/> *6.5.2 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 9.</p> <p>*6.6.3 <i>Number Power: Calculator Power for the GED</i>. McGraw-Hill/Contemporary. 2000. ISBN: 0-07-251697-6. Ch 3.</p> <p><i>Workplace Essential Skills 1</i>. Kentucky Educational Television/PBS Multimedia. 2004. Seg 23.</p> <p><i>Math Exercises: Measurement</i>. Contemporary. 1994. ISBN: 0-8092-0751-6. All.</p> |
| <p><b>Recognize and analyze Euclidean transformations (e.g. reflections, rotations, dilations and translations)</b></p> | <p><b>Computation</b><br/> *6.6.2 Recognize, use, and measure linear dimensions, geometric shapes, or angles</p>                              | <p><b>Computation</b><br/> *6.6.2 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</p>   |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|--|--|--|
| <p><b>Continued: Recognize and analyze Euclidean transformations (e.g. reflections, rotations, dilations and translations)</b></p>           | <p><b>Computation</b><br/> *6.6.3 Measure area and volume of geometric shapes</p>  | <p><b>Computation</b><br/> *6.6.3 <i>Number Power: Calculator Power for the GED.</i><br/> McGraw-Hill/Contemporary. 2000. ISBN: 0-07-251697-6. Ch 3.</p> <p><i>Workplace Essential Skills 1.</i><br/> Kentucky Educational Television/PBS Multimedia. 2004. Seg 23.</p> <p><i>Math Exercises: Measurement.</i><br/> Contemporary. 1994.<br/> ISBN: 0-8092-0751-6. All.</p> |
| <p><b>Determine whether a given pair of figures on a coordinate plane represents a translation, reflection, rotation and/or dilation</b></p> | <p><b>Computation</b><br/> *6.5.2 Recognize and apply simple geometric formulas</p> <p>*6.6.2 Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> | <p><b>Computation</b><br/> *6.5.2 <i>Contemporary's GED: Mathematics,</i><br/> McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 9.</p> <p>*6.6.2 <i>Contemporary's GED: Mathematics,</i><br/> McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9.</p>   |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|---|--|--|
| <p><b>Continued: Determine whether a given pair of figures on a coordinate plane represents a translation, reflection, rotation and/or dilation</b></p> | <p><b>Learning to Learn</b><br/> <b>7.2.2</b> Analyze a situation, statement, or process, identifying component elements and causal and part/whole relationships</p>                       | <p><b>Learning to Learn</b><br/> <b>7.2.2</b> <i>Contemporary's GED: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. Ch 1, 3.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> |
| <p><b>Apply transformational principles to practical situations (e.g., enlarge a photograph)</b></p>  | <p><b>Computation</b><br/> <b>*6.5.2</b> Recognize and apply simple geometric formulas</p> <p><b>*6.6.2</b> Recognize, use, and measure linear dimensions, geometric shapes, or angles</p> | <p><b>Computation</b><br/> <b>*6.5.2</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 9.</p> <p><b>*6.6.2</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2232-9, Ch 7, 9</p>  |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators              | Program Resources   |
|---|---|---|
| <p><b>Continued: Apply transformational principles to practical situations (e.g., enlarge a photograph)</b></p> | <p><b>Computation</b><br/> *6.6.7 Solve measurement problems in stipulated situations</p> | <p><b>Computation</b><br/> *6.6.7 <i>Math Exercises: Measurement. Contemporary. 1996. ISBN: 0-8092-0751-6. All.</i></p> <p><i>Workplace Essential Skills 1. Kentucky Educational Television/PBS Multimedia. 2004. Seg 18, 20. 23.</i></p> <p><i>JSEP Plus: Industry Applied Skills. Invest Learning. Software. 1996. All.</i></p> |

## MATHEMATICS STANDARD: Data Analysis, Statistics, and Probability

The student will apply data collection, data analysis, and probability to interpret, predict, and solve real-life problems. Upon exiting the high adult secondary level, the student will:

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources   |
|--|---|---|
| <p><b>Construct, analyze, and interpret tables, charts, and graphs</b></p> | <p><b>Computation</b><br/> *6.6.5 Interpret diagrams, illustrations, and scale drawings</p> <p>*6.7.1 Interpret data given in a line graph</p> <p>6.7.2 Interpret data given in a bar graph</p> <p>6.7.4 Interpret data given in a circle graph</p> | <p><b>Computation</b><br/> *6.6.5 <i>Aztec Courseware. Aztec Software Associates. Multimedia. 1999. Ut 16.</i></p> <p><i>Workplace Essential Skills 1. Kentucky Educational Television/PBS Multimedia. 2004. Seg 16, 18, 22.</i></p> <p><i>Math Exercises: Measurement. Contemporary. 1994. ISBN: 0-8092-0751-6. All.</i></p> <p>*6.7.1 <i>Contemporary's GED: Mathematics, McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 8.</i></p> <p>6.7.2 <i>Contemporary's GED: Mathematics. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2232-9. Ch 8.</i></p> <p>6.7.4 <i>Contemporary's GED: Mathematics. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2232-9. Ch 8.</i></p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|--|--|--|
| <p><b>Evaluate the reasonableness of conclusions drawn from interpretation of data in a graphic format</b></p> | <p><b>Computation</b><br/> <b>6.5.4</b> Recognize and evaluate logical statements</p> <p><b>*6.7.1</b> Interpret data given in a line graph</p> <p><b>6.9.2</b> Estimate answers</p> <p><b>Learning to Learn</b><br/> <b>7.2.5</b> Evaluate a situation, statement, or process, assembling information and providing evidence, making judgments, examining assumptions, and identifying contradictions</p> | <p><b>Computation</b><br/> <b>6.5.4</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 11.</p> <p><b>*6.7.1</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 8.</p> <p><b>6.9.2</b> <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 1.</p> <p><b>Learning to Learn</b><br/> <b>7.2.5</b> <i>Contemporary's GED Exercise Books: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2235-3. All.</p> <p><i>Contemporary's GED: Social Studies</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2229-9. Ch 3, 4.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|---|--|--|
| <p><b>Draw inferences including measures of central tendency, from charts, tables, graphs and data plots that summarize data from real-world situations</b></p> | <p><b>Consumer Economics</b><br/> <b>1.2.1</b> Interpret advertisements, labels, charts, and price tags in selecting goods and services</p> <p><b>Employment</b><br/> <b>4.4.3</b> Interpret job-related signs, charts, diagrams, forms, and procedures, and record information on forms, charts, checklists, etc.</p> | <p><b>Consumer Economics</b><br/> <b>1.2.1</b> <i>Aztec Courseware</i>. Aztec Software Associates. Multimedia. 1999. Ut 6, 9, 10.</p> <p><i>Workplace Essential Skills 1</i>.<br/> KT Kentucky Educational Television/PBS Multimedia. 2004. Seg 16, 18, 19.</p> <p><i>Workplace Essential Skills 2</i>.<br/> KT Kentucky Educational Television/PBS Multimedia. 2004. Seg 16, 18, 19.</p> <p><b>Employment</b><br/> <b>4.4.3</b> <i>GED Scoreboost. Writing: Essay Writing and Organizational Skills</i>. New Readers Press. 2002. ISBN: 1-56420-442-1. Ch 11.</p> <p><i>Transition and Life Skills: Workplace Language Transition and Life</i>. Piney Mountain Press. Inc. Software. 2000. All.</p> <p><i>Workplace Essential Skills 2</i>.<br/> KT Kentucky Educational Television/PBS Multimedia. 2004. Seg 7, 8, 13.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|--|---|--|
| <p><b>Continued: Draw inferences including measures of central tendency, from charts, tables, graphs and data plots that summarize data from real-world situations</b></p> | <p><b>Computation</b><br/> <b>6.7.4</b> Interpret data given in a circle graph</p> <p><b>Learning to Learn</b><br/> <b>7.2.2</b> Analyze a situation, statement, or process, identifying component elements and causal and part/whole relationships</p> <p><b>7.2.5</b> Evaluate a situation, statement, or process, assembling information and providing evidence, making judgments, examining assumptions, and identifying contradictions</p> | <p><b>Computation</b><br/> <b>6.7.4</b> <i>Contemporary's GED: Mathematics.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2232-9. Ch 8.</p> <p><b>Learning to Learn</b><br/> <b>7.2.2</b> <i>Contemporary's GED: Science.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. Ch 1, 3.</p> <p><i>Contemporary's GED Exercise Books: Social Studies,</i> McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> <p><b>7.2.5</b> <i>Contemporary's GED Exercise Books: Science.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2235-3. All.</p> <p><i>Contemporary's GED: Social Studies.</i> McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2229-9. Ch 3, 4.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|--|---|--|
| <p><b>Organize collections of data into frequency charts, stem-and-leaf plots, scatter plots and matrices and determine outliers</b></p> | <p><b>Learning to Learn</b><br/> <b>7.2.2</b> Analyze a situation, statement, or process, identifying component elements and causal and part/whole relationships</p> <p><b>7.2.3</b> Make comparisons, differentiating among, sorting, and classifying items, information, or ideas</p> | <p><b>Learning to Learn</b><br/> <b>7.2.2</b> <i>Contemporary's GED: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. Ch 1, 3.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> <p><b>7.2.3</b> <i>Contemporary's GED Exercise Books: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2235-3. All.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|--|---|--|
| <p><b>Apply curve fitting to make predictions from data, e.g. draw a line or a curve which closely fits a scatter plot</b></p> | <p><b>Learning to Learn</b><br/> <b>7.2.2</b> Analyze a situation, statement, or process, identifying component elements and causal and part/whole relationships</p> <p><b>7.2.3</b> Make comparisons, differentiating among, sorting, and classifying items, information, or ideas</p> | <p><b>Learning to Learn</b><br/> <b>7.2.2</b> <i>Contemporary's GED: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. Ch 1, 3.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> <p><b>7.2.3</b> <i>Contemporary's GED Exercise Books: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2235-3. All.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|---|--|---|
| <p><b>Continued: Apply curve fitting to make predictions from data, e.g. draw a line or a curve which closely fits a scatter plot</b></p>   | <p><b>Learning to Learn</b><br/> <b>7.2.4</b> Identify or make inferences through inductive and deductive reasoning to hypothesize, predict, conclude, and synthesize; distinguish fact from opinion, and determine what is mandatory and what is discretionary</p>                  | <p><b>Learning to Learn</b><br/> <b>7.2.4</b> <i>Contemporary's GED: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. Ch 1, 3.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p>              |
| <p><b>Explain the effects of sampling on statistical claims and recognize misuses of statistics, e.g. differentiate between a biased and an unbiased sample; recognize the impact of interpreting data from a biased sample</b></p> | <p><b>Computation</b><br/> <b>6.8.1</b> interpret statistical information used in news reports and articles</p> <p><b>Learning to Learn</b><br/> <b>7.2.2</b> Analyze a situation, statement, or process, identifying component elements and causal and part/whole relationships</p> | <p><b>Computation</b><br/> <b>6.8.1</b> <i>Contemporary's GED: Mathematics</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2232-9. Ch 8.</p> <p><b>Learning to Learn</b><br/> <b>7.2.2</b> <i>Contemporary's GED: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. Ch 1, 3.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|---|---|--|
| <p><b>Continued: Explain the effects of sampling on statistical claims and recognize misuses of statistics, e.g. differentiate between a biased and an unbiased sample; recognize the impact of interpreting data from a biased sample</b></p>            | <p><b>Learning to Learn</b><br/> <b>7.2.4</b> Identify or make inferences through inductive and deductive reasoning to hypothesize, predict, conclude, and synthesize; distinguish fact from opinion, and determine what is mandatory and what is discretionary</p> | <p><b>Learning to Learn</b><br/> <b>7.2.4</b> <i>Contemporary's GED: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. Ch 1, 3.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> |
| <p><b>Determine probabilities through experiments and/or simulations and compare the results with prediction, e.g. use simulations to estimate probabilities of real-life situations; design a statistical experiment based on a given hypothesis</b></p> | <p><b>Computation</b><br/> <b>*6.8.2</b> Interpret statements of probability</p>  | <p><b>Computation</b><br/> <b>*6.8.2</b> <i>Contemporary's GED: Mathematics</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2232-9. Ch 8.</p>  |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|--|---|--|
| <p><b>Continued: Determine probabilities through experiments and/or simulations and compare the results with prediction, e.g. use simulations to estimate probabilities of real-life situations; design a statistical experiment based on a given hypothesis</b></p> | <p><b>Learning to Learn</b><br/> <b>7.2.2</b> Analyze a situation, statement, or process, identifying component elements and causal and part/whole relationships</p> <p><b>7.2.3</b> Make comparisons, differentiating among, sorting, and classifying items, information, or ideas</p> | <p><b>Learning to Learn</b><br/> <b>7.2.2</b> <i>Contemporary's GED: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. Ch 1, 3.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> <p><b>7.2.3</b> <i>Contemporary's GED Exercise Books: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2235-3. All.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators  | Program Resources  |
|--|---|--|
| <p><b>Continued: Determine probabilities through experiments and/or simulations and compare the results with prediction, e.g. use simulations to estimate probabilities of real-life situations; design a statistical experiment based on a given hypothesis</b></p> | <p><b>Learning to Learn</b><br/> <b>7.2.4</b> Identify or make inferences through inductive and deductive reasoning to hypothesize, predict, conclude, and synthesize; distinguish fact from opinion, and determine what is mandatory and what is discretionary</p> | <p><b>Learning to Learn</b><br/> <b>7.2.4</b> <i>Contemporary's GED: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. Ch 1, 3.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> |
| <p><b>Draw conclusions about the “spread” of data given the variance and standard deviation (e.g., compare sets of data with the same central tendency but with different variance)</b></p>  | <p><b>Learning to Learn</b><br/> <b>7.2.2</b> Analyze a situation, statement, or process, identifying component elements and causal and part/whole relationships</p>  | <p><b>Learning to Learn</b><br/> <b>7.2.2</b> <i>Contemporary's GED: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. Ch 1, 3.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> |

| Indicators   | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources  |
|--|--|--|
| <p><b>Continued: Draw conclusions about the “spread” of data given the variance and standard deviation (e.g., compare sets of data with the same central tendency but with different variance)</b></p> | <p><b>Learning to Learn</b><br/> <b>7.2.3</b> Make comparisons, differentiating among, sorting, and classifying items, information, or ideas</p> <p><b>7.2.4</b> Identify or make inferences through inductive and deductive reasoning to hypothesize, predict, conclude, and synthesize; distinguish fact from opinion, and determine what is mandatory and what is discretionary</p> | <p><b>Learning to Learn</b><br/> <b>7.2.3</b> <i>Contemporary's GED Exercise Books: Science.</i><br/> McGraw-Hill/Contemporary. 2002.<br/> ISBN: 0-8092-2235-3. All.</p> <p><i>Contemporary's GED Exercise Books: Social Studies,</i><br/> McGraw-Hill/Contemporary, 2002,<br/> ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading.</i><br/> McGraw-Hill/Contemporary. 2002.<br/> ISBN: 0-8092-2234-5. All.</p> <p><b>7.2.4</b> <i>Contemporary's GED: Science.</i><br/> McGraw-Hill/Contemporary. 2002.<br/> ISBN: 0-8092-2230-2. Ch 1, 3.</p> <p><i>Contemporary's GED Exercise Books: Social Studies,</i><br/> McGraw-Hill/Contemporary, 2002,<br/> ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading.</i><br/> McGraw-Hill/Contemporary. 2002.<br/> ISBN: 0-8092-2234-5. All.</p> |

| Indicators  | Suggested CASAS Competencies That Provide Context for Standards / Indicators   | Program Resources   |
|---|--|---|
| <p><b>Determine from a given plot of data whether it has strong or weak, positive or negative correlation</b></p> | <p><b>Computation</b><br/>*6.7.1 Interpret data given in a line graph</p> <p><b>Learning to Learn</b><br/>7.2.2 Analyze a situation, statement, or process, identifying component elements and causal and part/whole relationships</p> | <p><b>Computation</b><br/>*6.7.1 <i>Contemporary's GED: Mathematics</i>, McGraw-Hill/Contemporary 2002, ISBN: 0-8092-2232-9, Ch 8.</p> <p><b>Learning to Learn</b><br/>7.2.2 <i>Contemporary's GED: Science</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2230-2. Ch 1, 3.</p> <p><i>Contemporary's GED Exercise Books: Social Studies</i>, McGraw-Hill/Contemporary, 2002, ISBN: 0-8092-2234-5, All.</p> <p><i>Contemporary's GED Exercise Books: Language Arts/Reading</i>. McGraw-Hill/Contemporary. 2002. ISBN: 0-8092-2234-5. All.</p> |