

City Colleges of Chicago
ADULT EDUCATION PROGRAM
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Beginning ABE (2.0 – 3.9) – Math Course Syllabus

Instructor: Sharon Bryant

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Course Title: Beginning ABE Math

Course Number: 0123

Section Number: 001

Term: Spring 2009 (January 20, – March 13, 2009)

Class Schedule: Tuesday, Wednesday & Thursday 9 am – 12 pm

Lab: Tuesday & Thursday 12:05 pm – 1:05 pm

Course Description: This 8-week Adult Basic Education Math course is designed to reinforce addition, subtraction, and estimation competencies, simple decimals and fractions are also introduced during the course. Mathematical lessons reflect real-life situations and usage in which sound knowledge of vocabulary, critical thinking, and mathematical concepts are needed. Pre-requisites: Successful completion in Beginning Literacy Math or TABE score of 2.0 or higher.

Course Objectives:

1. Recognize even (e.g. 0, 2, 4, 6, and 8 etc) and odd (e.g. 1, 3, 5, 7, and 9, etc) number endings.
2. Know that the position of a digit signifies its value (ones, tens, hundreds, etc), including the use of zero.
3. Associate whole numbers to their respective spoken names, written, and numerals.
4. Memorize time tables 6 – 12.
5. Add or subtract 2 through 4-digit numbers with or without regrouping numbers, apply rules if necessary.
6. Multiply and divide 2 and 3 digit numbers.
7. Identify dimensional shapes (e.g. a square, circle, rectangle, and a triangle) and use in simple word problems.
8. Define: metrics and solve basic metric conversion problems.
9. Solve two-step word problems applying appropriate operations (addition, subtraction, multiplication and or division).
10. Distinguish how mode, mean, and median are used in simple word problems.
11. Define: fractions and distinguish proper fractions, improper fractions and mixed fractions.
12. Divide the whole into parts (e.g. dividing a pizza into equal parts).
13. Define: decimals and compare decimals according to size (e.g. difference between .07 & .7).
14. Identify place values to the right and left of the decimal point.
Illustrate and demonstrate the connection between decimals and money.

Student Learning Outcomes:

- Apply understanding of ways numbers are represented and used in the real world (Use fractions $\frac{1}{2}$ or $\frac{1}{4}$, classify as even or odd).
- Perform the four basic mathematical operations using whole numbers up to three digits (add, subtract, multiplication and division).
- Use beginning estimation knowledge and units of measurement skills to solve mathematical problems.
- Apply mathematical vocabulary and concepts to solve specific word problems.

Student Expectations:

1. Students are encouraged to attend every class with the desire to gain, grow, and develop the necessary concepts, skills and understanding needed to successfully pass the GED tests.
2. Students are expected to be in class on time ready to work and participate in activities and provide input.
3. Students are expected to complete all assignments and homework.
4. The Adult Education Department follows **CCC & ICCB rules regarding attendance**. Students who are absent for six consecutive days will be dropped from the class immediately.

Evaluation Methods:

1. Skills Inventory Pre- & Post tests
2. Quizzes
3. *Mid-term exam
4. Final exam (TABE or Skills)

* Makeup quizzes and Mid-term exam must be taken prior to the next class meeting.

Textbook Information: Contemporary's Number Power 1 & 2, Achieving TABE Success Math, Math Notebook/Journal, (Casio FX—260 Solar Calculator is recommended, not required).

Web based resources:

<http://www.ntlf.com/html/lib/bib/91-9ig.htm>

<http://icarus.ubetc.buffalo.edu/etc/tlr/whatis.html>

<http://www.wcer.wisc.edu/archive/cl1/cl/doingcl/sndprob.htm>

http://slincs.coe.utk.edu/gtelab/learning_activities/34chec.html

http://slincs.coe.utk.edu/gtelab/learning_activities/74bowk.html

Supplies and Supplementary Materials: Handouts, TV/VCR, computer lab, and other math manipulatives, as needed.

Topical Outline/Course Calendar (Week-by-Week Schedule)

Math Tutoring in the Math Computer Lab meets directly after class.

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| Week 1 | Introduction to course content, overview of Syllabus, and Course expectations Skills Inventory Pre-test Video tape "Passing the GED Math Tests" How to Make Sense of Numbers What is the purpose of the Progress Chart & Math Journal |
| Week 2 | Mad Math Drills (Tables 1-5) Review of Skills Inventory Pre-test & Number sense Introduction: Addition & Subtraction Properties Journal: In your journal, describe what images come to mind when you think about jobs involving math Share journal with class Cooperative Group Activity – Identify and match math properties |
| Week 3 | Mad Math Drill (Tables 6-7) Review of Addition & Subtraction Properties Mental math Addition & Subtraction problems Introduce/Review Mode, Mean & Median Journal: In your journal, describe how you might teach someone to add or subtract Share Journal with class Review strategies for Quiz One (Number Sense, Mode, Median, and Mean, Addition & Subtraction) Quiz one & review results from quiz one Introduction: Understanding Multiplication Video tape "Understanding Multiplication" * Makeup quizzes and Mid-term exam must be taken prior to the next class meeting. |
| Week 4 | Mad Math Drills (Tables 6-9) Mental Math (Cooperative Group Activity) Mental Math Challenge (multiplication) Journal: In your journal, complete sentences: Share journal with class Review strategies for mid-term exam (Number Sense, mode, median and mean, addition, subtraction & multiplication) Mid-term exam, review mid-term results and distribute mid-point progress charts Introduction: Understanding Division & Video " Understanding Division" * Makeup quizzes and Mid-term exam must be taken prior to the next class meeting. |
| Week 5 | Mad Math Drills (Tables 6-11) Review of Division strategies and Order of Operations Mental math (Simple-one step word problems) Journal: In your journal, describe how you used math this week outside of class Review strategies for quiz two (Number Sense, addition, subtraction, multiplication, division, mode, median and mean) Introduce dimensional shapes & basic metric conversions |
| Week 6 | Quiz two & review results from quiz two Journal: In your journal, create a short word problem that a student could solve |

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| | <p>Cooperative Group Activity –create 4-6 short simple word problems; problems should incorporate dimensional shapes, * Makeup quizzes and Mid-term exam must be taken prior to the next class meeting</p> <p>basic metric conversions, the four operations, mode, median and the mean</p> <p>Mental math: Simple-one and two-step word problems. These problems will incorporate dimensional shapes, basic metric conversions, the four operations, mode, median and the mean</p> <p>Introduction: Simple decimals and fractions and video tape “Simple Decimals and Fractions”</p> |
| Week 7 | <p>Mad Math Drills (Tables 6-12)</p> <p>Journal: In your journal, explain how you feel about math now as compared to the first week of class, share journal in class</p> <p>Cooperative Group Activity –create simple one & two-step word problems (see above & include simple decimals and fractions). Each group will submit 2 one-step word problems and 2 two-step word problems/w steps to compute and answers</p> <p>Review for quiz – Work-out word problems submitted by each group on the board</p> <p>Review strategies for final exam Review will focus on: Number sense, simple conversions, dimensional shapes, four operations, simple decimals & fractions</p> |
| Week 8 | <p>Final exam: Skills Inventory Post test – Tuesday only</p> <p>Review final exam during Individual student-progress conferences (Wednesday – Friday)</p> |

Methods of Instruction:

1. Discussions & Lectures: Contextualization & Active learning strategies are used throughout instruction. Strategies are designed to meet the adult learners' needs based on ability levels.
2. Cooperative learning groups, independent study, and technology are incorporated in assignments, depending on the student-learning activities assigned.

College Resources: Each CCC provides a variety of services to assist students achieve their academic goal(s). Please visit the following depts.: Academic Resources, Advising Resources, and Technology Services or visit the CCC website at www.ccc.edu.

Students with disabilities who believe they may need accommodations are encouraged to contact the Dean of Adult Education or the College's Special Needs Office at (312) 553-xxxx, as soon as possible to determine eligibility.