

# MATHEMATICS

## Level 4.0 - 5.9 • (Intermediate Low Basic Education)

### Literacy Completion Point C

Student: _____	ID #: _____	Entry Date: _____
Institution: _____	Date Achieved: _____	
Site: _____	Instructor(s): _____	

Program Number: 9900000

Course Number: 9900001

CIP Number: 1532.010200

PLEASE CHECK CORRESPONDING BOX AS EACH STANDARD IS ACHIEVED.

### STANDARD 17

Show awareness of the ways whole numbers are represented and used in the real world

Date: \_\_\_\_\_ Instructor: \_\_\_\_\_

The student will be able to:

- 17.01 Identify whole numbers containing up to 7-digit numeration (millions, thousands, hundreds, tens, and ones).
- 17.02 Associate whole numbers to their respective spoken names, written names, and numerals.
- 17.03 Understand the relative size of whole numbers.

### STANDARD 18

Demonstrate proficiency in adding and subtracting whole numbers

Date: \_\_\_\_\_ Instructor: \_\_\_\_\_

The student will be able to:

- 18.01 Add with and without regrouping a 1-, 2- or 3-digit number to a 3-digit number given in vertical notation.
- 18.02 Add with and without regrouping three or four 3-digit numbers given in vertical notation.
- 18.03 Add with and without regrouping three or four 4-digit numbers given in vertical notation.
- 18.04 Subtract with and without regrouping two 3-digit numbers given in vertical notation.
- 18.05 Subtract with and without regrouping two 5-digit numbers given in both vertical and horizontal notation.
- 18.06 Borrow where the minuend is a digit followed by three zeros and regrouping is necessary, e.g., 6000 - 495.

### STANDARD 19

Multiply whole numbers

Date: \_\_\_\_\_ Instructor: \_\_\_\_\_

The student will be able to:

- 19.01 Multiply a 2-digit number by a 2-digit number.
- 19.02 Multiply a 3-digit number by a 1-, 2-, or 3-digit number.
- 19.03 Multiply a 4-digit number by a 1-, 2-, or 3-digit number.
- 19.04 Demonstrate proof method for multiplication, e.g.,  $64 \times 27 = 27 \times 64$ .

### STANDARD 20

Divide whole numbers

Date: \_\_\_\_\_ Instructor: \_\_\_\_\_

The student will be able to:

- 20.01 Divide 3- or 4-digit numbers by a 1-digit number where the quotient is with or without a remainder.
- 20.02 Divide 3- or 4-digit numbers by a 2-digit number where the quotient is with or without a remainder.
- 20.03 Divide by a 3-digit number where the quotient is with or without a remainder.
- 20.04 Prove long-division problems.

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## STANDARD 21

### Demonstrate proficiency in number sense, concepts, and operations involving fractions

Date: \_\_\_\_\_ Instructor: \_\_\_\_\_

The student will be able to:

- 21.01 Associate commonly used fractions ( $1/2$ ,  $1/4$ ,  $1/3$ ,  $3/4$ , and  $2/3$ ) to their respective spoken names, written names, and numerals.
- 21.02 Understand the relative size of commonly used fractions.
- 21.03 Understand that commonly used fractions can be represented in other equivalent forms, such as, decimals and percents ( $1/2 = 50\% = .5$ ).
- 21.04 Write numbers as fractions.
- 21.05 Understand the concepts of numerators and denominators.
- 21.06 Identify proper and improper fractions and mixed numbers.
- 21.07 Convert from mixed numbers to improper fractions.
- 21.08 Convert from improper fractions to mixed numbers.
- 21.09 Reduce common fractions to their lowest common denominators.
- 21.10 Convert fractions to equivalent fractions.
- 21.11 Add fractions with common denominators.
- 21.12 Subtract fractions with common denominators.
- 21.13 Multiply proper fractions.
- 21.14 Multiply proper fractions by whole numbers.

## STANDARD 22

### Demonstrate proficiency with number sense, concepts, and operations involving decimals

Date: \_\_\_\_\_ Instructor: \_\_\_\_\_

The student will be able to:

- 22.01 Associate decimals - including tenths, hundredths, and thousandths - to their respective spoken names, written names, and numerals.
- 22.02 Understand the relative size of decimals.
- 22.03 Understand that decimals can be represented in other equivalent forms, e.g., fractions.
- 22.04 Convert common fractions to decimals.
- 22.05 Convert decimals to common fractions.
- 22.06 Add and subtract decimals.
- 22.07 Select the appropriate operation to solve specific problems involving decimals.
- 22.08 Understand the relationship between money and decimals.
- 22.09 Solve real-world problems involving decimals.

## STANDARD 23

### Use estimation to problem solve and compute

Date: \_\_\_\_\_ Instructor: \_\_\_\_\_

The student will be able to:

- 23.01 Use and justify different estimation strategies in a real-world problem situation, and determine the reasonableness of results of calculations in a given problem situation.
- 23.02 Solve real-world problems with the help of estimating measurements including length, time, weight, temperature, money, perimeter, area, and volume, and compare the results to actual measurements.
- 23.03 Round a whole number less than one million to any designated place.
- 23.04 Round fractions and mixed numbers to the nearest whole numbers.
- 23.05 Use rounding techniques to estimate the solution to a real-world addition or subtraction measurement problem; then determine the actual result.

## STANDARD 24

### Demonstrate proficiency in measuring quantities and solving problems related to measurement

Date: \_\_\_\_\_ Instructor: \_\_\_\_\_

The student will be able to:

- 24.01 Write abbreviations for length, weight, and capacity measurements in the customary\* system.
- 24.02 Identify equal measures defined in different units.
- 24.03 Measure to the nearest  $1/4$  inch on a 12-inch ruler.
- 24.04 Solve measurement problems in the customary\* system using addition or subtraction with no conversion.
- 24.05 Determine temperature using a Fahrenheit or Celsius thermometer.
- 24.06 Determine capacity by measuring quantities in teaspoons, tablespoons, cups, pints, quarts, gallons, and liters.
- 24.07 Recognize, use, measure, and interpret linear dimensions and geometric shapes.
- 24.08 Use and interpret measurement instruments, such as, rulers, scales, gauges, and dials.
- 24.09 Interpret diagrams, illustrations, and scale drawings.
- 24.10 Interpret spatial relationships, e.g., above, below, nearer, farther, and equidistant.
- 24.11 Interpret measurements in recipes.
- 24.12 Convert equivalent measurements, e.g., cups to quarts.

\*Customary refers to the system of measurement used in the United States.

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## STANDARD 25

### Demonstrate proficiency in solving problems involving algebra

Date: \_\_\_\_\_ Instructor: \_\_\_\_\_

The student will be able to:

- 25.01 Describe a variety of patterns and relationships through models; such as, manipulatives, tables, graphs, and rules.
- 25.02 Translate a problem from words to a number symbol sentence, e.g., six plus one equals seven to  $6 + 1 = 7$ .
- 25.03 Recognize simple algebraic formulas, e.g.,  $1 + 3 = x$ .
- 25.04 Recognize simple consumer formulas, e.g., units times price = cost.

## STANDARD 26

### Interpret data from graphs, charts, and maps

Date: \_\_\_\_\_ Instructor: \_\_\_\_\_

The student will be able to:

- 26.01 Solve problems by generating, collecting, organizing, displaying, and analyzing data using bar graphs, circle graphs, line graphs, pictographs, and charts.
- 26.02 Interpret data in charts, tables, plots, graphs, and maps.
- 26.03 Understand and find averages (means).
- 26.04 Locate a point on a highway map.

## STANDARD 27

### Calculate differences to solve problems encountered in daily living

Date: \_\_\_\_\_ Instructor: \_\_\_\_\_

The student will be able to:

- 27.01 Calculate reported differences, e.g., minutes spent working on two jobs.
- 27.02 Calculate the differences between two hourly wages.
- 27.03 Determine the net cost of groceries after deducting the value of coupons.
- 27.04 Calculate the difference between figures from a summarizing table.
- 27.05 Use hourly and daily wage rates to calculate the difference in earnings.
- 27.06 Determine the difference between lengths of business hours on weekdays and weekends.
- 27.07 Calculate the savings between two specific subscription rates.
- 27.08 Calculate the amount of increase using figures from a bar graph.
- 27.09 Determine daily earnings based on hourly rate and number of hours worked.
- 27.10 Use figures from a comparison table to calculate increases.
- 27.11 Total the amount of fines accrued for several driving violations.

## STANDARD 28

### Apply arithmetic operations to information contained in printed materials

Date: \_\_\_\_\_ Instructor: \_\_\_\_\_

The student will be able to:

- 28.01 Use an order form to determine the total cost of a purchase.
- 28.02 Determine the total for an order after calculating the cost of two items and sales tax (using a tax table).
- 28.03 Determine the total cost of multiple items ordered from a menu, including, one item having multiple quantities.
- 28.04 Use an advertisement to determine the total cost of several items in different quantities.

## STANDARD 29

### Demonstrate proficiency in consumer math skills

Date: \_\_\_\_\_ Instructor: \_\_\_\_\_

The student will be able to:

- 29.01 Develop a personal budget for a set income.
- 29.02 Plan for major purchases, e.g., a car or a refrigerator.
- 29.03 Interpret information or directions to locate consumer goods, e.g., newspaper ads and yellow pages.
- 29.04 Identify and use methods to purchase goods and services; including, catalogs, order forms, and related information.
- 29.05 Interpret advertisements, labels, charts, letters, articles, price tags, or other information in selecting goods and services.
- 29.06 Write personal checks or money orders to purchase goods and services.
- 29.07 Complete a deposit and withdrawal form.

Administrator: \_\_\_\_\_ Instructor: \_\_\_\_\_

Signatures verify achievement of LITERACY COMPLETION POINT C Effective: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_