

Literacy Foundations Math Level 5

Course Outline & Learning Objectives Overview

Instructor

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Availability

Various: Monday – Thursday
10:00 am – 2:00 pm & 5:00 pm – 9:00 pm

The Course

This is a self-paced self-directed course designed for adults who have been out of school for an extended period of time and need to review the basic algebra and geometry skills.

Course Outline

Unit 1	Fractions
Unit 2	Ratio, Rate, Proportion, and Percents
Unit 3	Basic Geometry
Unit 4	Algebra I <ul style="list-style-type: none">• Numbers for Algebra• Tools for Algebra• Solving Equations• Coordinate System• Linear Equations
Unit 5	Algebra II <ul style="list-style-type: none">• Exponents• Roots and Radicals• Polynomials• Coordinate Geometry

You need to write a test after completing each unit.

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Learning Resources

- Study Booklets for each unit

Course Work

Students are expected to work independently, completing as many questions as necessary to master the skills included in each section. Individual help is always available from your instructor at the Learning Centre.

Evaluation

The tests will be weighted as follows:

TEST	CONTENT	PERCENT
Unit 1	Fractions	10
Unit 2	Ratio, Rate, Proportion, and Percents	20
Unit 3	Basic Geometry	20
Unit 4	Algebra I	25
Unit 5	Algebra II	25
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Important to Remember

- All tests **must** be written at CLOC during the Learning Centre hours on **Tuesdays, Wednesdays, and Thursdays**.
- You need to write the **unit 1 test** within 30 days of registering for this course.
- You may use a calculator on all the tests.
- You need to complete all your work and sign out 10 minutes before the closing time.

Study Guide

An important element for success in this course will be your study skills. It is much more productive to do some work every day rather than engaging in “marathon” sessions once every few days.

1. Set yourself realistic target dates.
2. Establish a study schedule for yourself and stick to it.

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Prescribed Learning Outcomes

NUMBER . . . *It is expected that students will:*

- A1 demonstrate an understanding of multiplication and division of fractions with like and unlike denominators concretely, pictorially, and symbolically
- A2 determine the relationship between positive repeating decimals and positive fractions (e.g., $1/3$) and positive terminating decimals and positive fractions (e.g., $1/8$)
- A3 compare and order positive fractions, decimals, and whole numbers using benchmarks (e.g., 0, $1/2$, 1)
- A4 solve problems involving the application of ratios and proportions
- A5 solve problems involving percentages and justify the solution
- A6 explain the process for addition, subtraction, multiplication, and division of integers concretely, pictorially, and symbolically
- A7 demonstrate an understanding of powers as repeated multiplication and explain the meaning of the base, coefficient, and exponent in a power
- A8 write powers as the product of factors and explain their meaning
- A9 evaluate expressions involving powers with integral bases
- A10 demonstrate an understanding of exponent rules for the multiplication and division powers to solve problems
- A11 express a given number using scientific notation
- A12 simplify expressions, including exponents, using order of operations

PATTERNS AND RELATIONS. . . . *It is expected that students will:*

- B1 represent algebraic expressions and equations in words
- B2 represent and describe patterns and relationships using graphs and a table of values
- B3 apply and explain how preservation of equality is used to solve equations
- B5 distinguish between expressions and equations and explain the similarities and differences
- B6 evaluate an expression given the value of the variable

SHAPE AND SPACE. . . . *It is expected that students will:*

- C1 explain the process for determining the circumference and area of a circle
3-D Objects and 2-D Shapes
- C2 calculate the volume of triangular prisms, cylinders, cones, and pyramids
Transformations
- C3 identify and plot points in the four quadrants of a Cartesian plane using ordered pairs

STATISTICS AND PROBABILITY. . . . *It is expected that students will:*

- D1 read, interpret, and construct line graphs from a given data set
- D2 express and interpret probabilities as ratios, fractions, or percents