



## **KeyTrain® Applied Mathematics Course Objectives, Outlines and Estimated Times of Completion**

### **Applied Mathematics Course Description:**

KeyTrain's Applied Mathematics course teaches how to solve one-step mathematical operations and utilize these skills with work-related problems. Examples and situations focus on applying problem-solving skills in real-world situations. The program uses a variety of interactive exercises so that the learner can practice each concept. A calculator function and formula sheet are available to the learner with a simple mouse-click. Detailed solutions to the problems are explained, allowing the student to analyze their mistakes. KeyTrain courses are comprehensive and easy-to-use. A full human-voice sound track and immediate feedback aid learning.

### **Applied Mathematics Level 3 Course Objectives:**

The learner shall: add, subtract, multiply, and divide using whole numbers; add and subtract using positive and negative numbers; change a quantity from one form to another using whole numbers, fractions, decimals, and percentages; solve simple one-step word problems in a systematic manner.

### **Applied Mathematics Level 3 Course Outline:**

Introduction; Math Review; Quantity; Money; Time; Measurement; Fractions & Decimals; Negative Numbers; Quiz (affirms course content)

### **Applied Mathematics Level 4 Course Objectives:**

The learner shall: reorder the information given in the problem and eliminate extraneous data in order to solve the problem; calculate one-step conversions; perform one or two mathematical operations; add, subtract, multiply, or divide positive or negative numbers. Calculate averages, simple ratios, proportions and rates using whole numbers and decimals; add simple fractions, decimals or percentages; read simple graphs and diagrams.

### **Applied Mathematics Level 4 Course Outline:**

Introduction; Money & Time; Fractions & Decimals; Percentages; Measurement; Averages; Proportions; Diagrams; Quiz (affirms course content)

### **Applied Mathematics Level 5 Course Objectives:**

The learner shall: determine perimeter and area; measure distance, volume, weight, time, and area; convert values between unit systems; work with mixed units in calculations. Handle fractions, decimals, and percentages in problems; determine production rates. Separate the important facts from extraneous information; look up formulas and use them appropriately to perform one-step conversions; calculate perimeter and areas of basic shapes. Calculate percentage discounts or markups; complete a balance sheet or order form; determine the best economic value of several alternatives using one- or two-step calculations to compare costs.

### **Applied Mathematics Level 5 Course Outline:**

Introduction; Fractions & Decimals; Percentages; Measurement; Perimeter & Area; Production Rates; Best Deals; Quiz (affirms course content)

**Applied Mathematics Level 6 Course Objectives:**

The learner shall: solve complicated multiple-step problems that may require manipulation of the original information; calculate using negative numbers, fractions, ratios, percentages, and mixed numbers; calculate multiple rates; compare ratios or use them to perform other calculations. Find areas of rectangles and volumes of rectangular solids; determine the best economic value of several alternatives and use the result in another problem; find mistakes in calculations; manipulate formulas to solve problems.

**Applied Mathematics Level 6 Course Outline:**

Introduction; Problem Solving; Multiple Steps; Fractions & Decimals; Percentages; Area & Volume; Rate Problems; Best Deals; Quiz (affirms course content)

**Applied Mathematics Level 7 Course Objectives:**

The learner shall: perform multiple step calculations; use non-linear functions; solve problems with more than one unknown; determine ratios and proportions; perform troubleshooting; calculate percentages. Do several steps of reasoning and multiple calculations; solve problems involving more than one unknown and/or non-linear functions; calculate the percentage of change; calculate multiple areas and volumes of sphere, cylinders, and cones. Set up and manipulate complex ratios and proportions; determine the best economic value of several alternatives; find mistakes in multiple-step calculations.

**Applied Mathematics Level 7 Course Outline:**

Introduction; Multiple Steps; Volume & Area; Ratios & Proportions; Best Deals; Multiple Unknowns; Troubleshooting; Non-Linear Functions; Quiz (affirms course content)

**Applied Mathematics Estimated Time of Completion**

Note: Although KeyTrain courses are delivered as an entire course with all Levels we are providing Level completion times.

<b>Course Name</b>	<b>Section Title</b>	<b>Estimated Time of Completion</b>
KeyTrain Applied Mathematics	Introduction and Work Keys Introduction	1 hour
KeyTrain Applied Mathematics	Pre-Test	1 hour
KeyTrain Applied Mathematics	Level 3	8 hours
KeyTrain Applied Mathematics	Level 4	8 hours
KeyTrain Applied Mathematics	Level 5	8 hours
KeyTrain Applied Mathematics	Level 6	8 hours
KeyTrain Applied Mathematics	Level 7	8 hours