

PLATO Course TABE Mathematics Level E

Course Overview

The PLATO Course TABE Mathematics Level E is outlined according to the Test for Adult Basic Education (TABE). The TABE is an analytical and reliable test, created to assess the proficiency levels and aptitude of adult learners. The PLATO Course TABE Mathematics Level E consists of four units that will improve your math skills. Each unit will build your knowledge in areas such as number concepts and computation with decimals, fractions, and percents. You will also cover geometry, data analysis, and problem solving. There are sections in each lesson that explain concepts in an easy manner, and will help you practice what you have learned, through activities and tests.

Course Goals

By the end of this course, you will be able to do the following:

- Add and subtract 2-digit numbers.
- Understand place values, and read and write numbers through the hundred thousands.
- Understand the relationship between addition and subtraction by using fact families and by using addition to check subtraction.
- Add and subtract multi-digit numbers one column at a time.
- Subtract with multiple regrouping and from large numbers that contain zeros, and solve real-life problems using addition and subtraction.
- Remember basic facts of multiplication from zero through five and six through ten.
- Multiply a 2-digit number and a 3-digit number by a 1-digit number, multiply when one of the factors is a multiple of 10 or 100, and multiply multiples of 10.
- Understand the meaning of division as fair sharing, and understand the relationship between multiplication and division using fact families.
- Use basic division facts and learn to divide by a 1-digit number.
- Understand how a fraction is used to represent parts of an object and a part of a collection of objects.
- Use fraction notation and represent fractions written in tenths as decimals.
- Change percents into decimals and fractions into percents.
- Determine points, lines, planes, rays, line segments, angles, and lines in a plane and understand their relationships with each other.
- Understand triangles, quadrilaterals, circles, and their parts.

- Measure the length of common objects using the metric unit of centimeters and the customary unit of inches.
- Read 12-hour and 24-hour clocks to the minute.
- Understand congruent, similar, and solid figures and their parts.
- Find the area of geometric shapes.
- Use rates to describe ratio relationships and use ratio reasoning to convert measurement units.
- Solve real-life problems using addition, subtraction, multiplication, division, ratios, proportions, percents, and measurements.

General Skills

To participate in this course, you should be able to do the following:

- Complete basic operations with word processing software, such as Microsoft Word or Google Docs.
- Understand the basics of spreadsheet software, such as Microsoft Excel or Google Spreadsheets, but having prior computing experience is not necessary.
- Perform online research using various search engines and library databases.
- Communicate through email, and participate in discussion boards.

For a complete list of general skills that are required for participation in online courses, refer to the Prerequisites section of the Student Orientation, found at the beginning of this course.

Course Materials

- Notebook
- Graphing calculator, recommend TI-83 or equivalent
- Computer with internet connection and speakers or headphones
- Microsoft Word or equivalent
- Microsoft Excel or equivalent

Unit 1: Number Concepts and Computation

Summary

In Unit 1, you will learn about number concepts and computation. You will add and subtract 2-digit numbers and several numbers. Here, you will also study place values, and read and write numbers through the hundred thousands. You will add two 2-digit

numbers that result in sums greater than 99. Then, you will study the relationship between addition and subtraction with the help of fact families, and by using addition to check subtraction. You will add and subtract multi-digit numbers one column at a time. You will then subtract with multiple regrouping and from large numbers that contain zeros, and solve real-life problems using addition and subtraction. Further, you will study basic multiplication facts, from zero through five, and from six through 10. You will multiply a 2-digit number and a 3-digit number by a 1-digit number, multiply when one of the factors is a multiple of 10 or 100, and multiply multiples of 10. Later, you will study the meaning of division as fair sharing, and understand the relationship between multiplication and division using fact families. Finally, you will study basic division facts, and divide by a 1-digit number.

Unit 2: Computation with Decimals, Fractions, and Percents

Summary

Unit 2 will focus on computation with decimals, fractions, and percents. Here, you will study how a fraction is used to represent parts of an object and a part of a collection of objects. Then, you will study fraction notation, and represent fractions written in tenths as decimals. Later, you will study percents, and change percents into decimals and fractions into percents.

Unit 3: Geometry and Measurement

Summary

Unit 3 is about geometry and measurement. Here, you will study points, lines, planes, rays, line segments, and angles. You will also learn about lines in a plane and their relationships with each other. Then, you will study triangles, quadrilaterals, circles, and their parts. You will also measure the length of common objects using the metric unit of centimeters and the customary unit of inches. Further, you will learn to read 12-hour and 24-hour clocks to the minute. Later, you will explore congruent, similar, and solid figures and their parts. You will also find the area of some geometric shapes. You will explore the concept of a unit rate and use rates to describe ratio relationships. Finally, you will use ratio reasoning to convert measurement units.

Unit 4: Data Analysis and Problem Solving

Summary

Unit 4 focuses on solving real-life problems. You will learn to solve these problems using addition and subtraction, multiplication and division, fractions and decimals, ratios, proportions, and percents, and geometry and measurement.