INTELLIGENT TUTOR™ CONCEPTS AND SKILLS SERIES

TRIGONOMETRY AND ADVANCED TOPICS

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Windows Network Version

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Program Summary

Objective

TRIGONOMETRY AND ADVANCED TOPICS is a complete and self-contained course designed for students and others engaged in self-study. Using graphics and animation, the program's tutorials will help students learn the concepts and ideas of trigonometry and other topics covered in the fourth year of high school mathematics, and learn how to apply these to solving problems.

Level

Grades: 11-12
Prerequisite: Intermediate Algebra

Minimum Computer Requirements

* 486 IBM or compatible PC with 8MB of RAM
* Windows 95, Windows 98, Windows 2000, or Windows NT
* 10MB of free hard disk space

Welcome to Trigonometry and Advanced Topics

Welcome to TRIGONOMETRY AND ADVANCED TOPICS in the INTELLIGENT TUTOR™ Concepts and Skills Series!

TRIGONOMETRY AND ADVANCED TOPICS is a complete and self-contained course designed especially for students and others engaged in self-study. It will allow you to work at your own pace, using easy to follow tutorials and problem solving exercises.

TRIGONOMETRY AND ADVANCED TOPICS was designed by math educators, and is comprehensive yet simple to use. Our goal is to build your math skills and make you more confident about using math in your everyday life, both inside and outside the classroom.

The lessons in TRIGONOMETRY AND ADVANCED TOPICS will provide you with a dynamic and unique learning experience. Graphics and animation are used throughout the lessons to present the ideas of math clearly and concretely.

Although the lessons are designed to be worked in order, you can study them in any order you wish. Easy to use menus allow you to go directly to any of the lessons in the program.

After working with TRIGONOMETRY AND ADVANCED TOPICS in our Concepts and Skills Series, you might be interested in TRIGONOMETRY AND ADVANCED TOPICS in the Practice and Review Series. It contains a wide variety of drill and practice exercises, and sample tests that will give you a profile of your overall skill level in trigonometry.

Topics Covered

TRIGONOMETRIC FUNCTIONS
Definition of Angle
Degrees and Radians
Defining Trigonometric Functions
Measuring with Trigonometry
Trig Functions of Angle Measures

IDENTITIES, FORMULAS, EQUATIONS
Simplifying Trigonometric Functions
Sums and Differences
Double Angle Formula
Trigonometric Equations

RIGHT TRIANGLES
Right Triangles I
Right Triangles II
Law of Cosines
Law of Sines

SERIES AND PROGRESSIONS
Arithmetic Progressions
Arithmetic Series
Geometric Progressions
Geometric Series
Binomial Theorem

PROBABILITY
Permutations
Combinations
Probability

Installing the Program

This program is a network version. It is meant to be installed with the INTELLIGENT TUTOR™ recordkeeping and management software included on the INTELLIGENT TUTOR™ CD-ROM.

Please refer to the installation instructions entitled "INTELLIGENT TUTOR™ Recordkeeping System" that were contained in the manila envelope you received with this package.

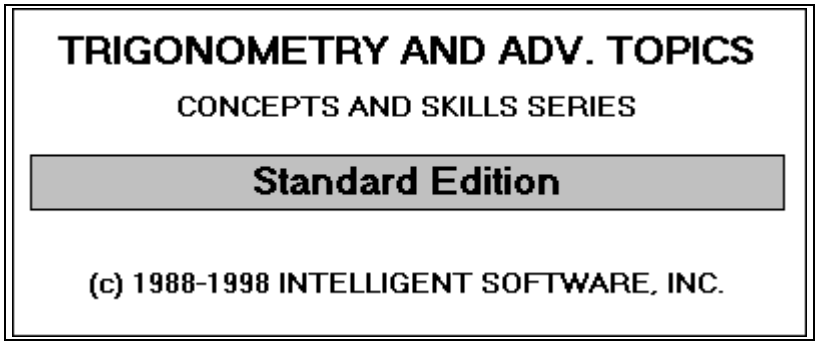
Starting the Program

Step 1 Click the **Start** button on the Windows taskbar. The Start menu opens.

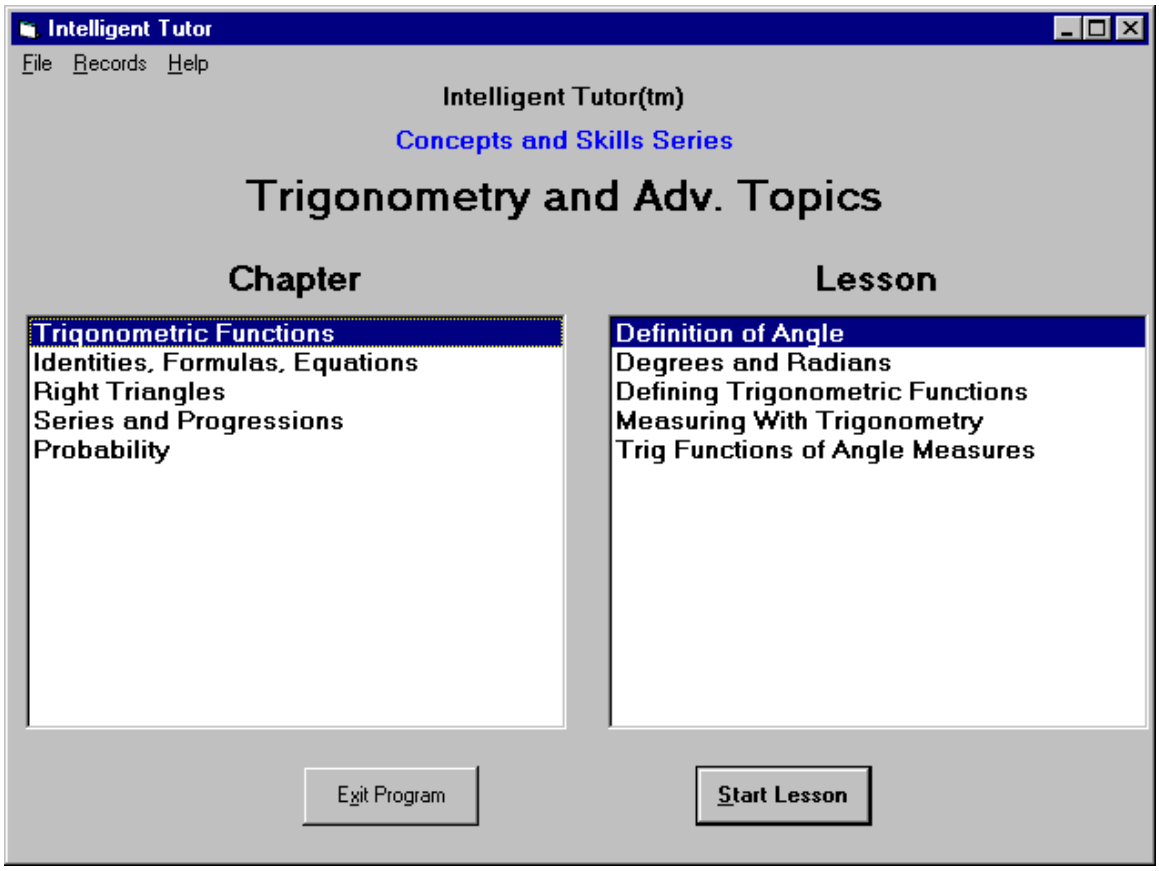
Step 2 Choose **Programs**. The Programs folder opens.

Step 3 Choose **Intelligent Tutor**.

Step 4 Click **Trigonometry Concepts**. The program will then begin, and the title screen (shown below) will appear. To move on to the program menu, click the title screen window, or press ENTER.



Using the Program



The program menu (shown above) is the starting point for your study of trigonometry. The **CHAPTER** window shows the chapters in the course. The **LESSON** window shows the lessons in the current highlighted chapter. To see a list of the lessons in a different chapter, click that chapter in the **CHAPTER** window.

To study a lesson, click the lesson in the **LESSON** window. Then click the **START LESSON** button at the bottom. Your lesson will then begin!

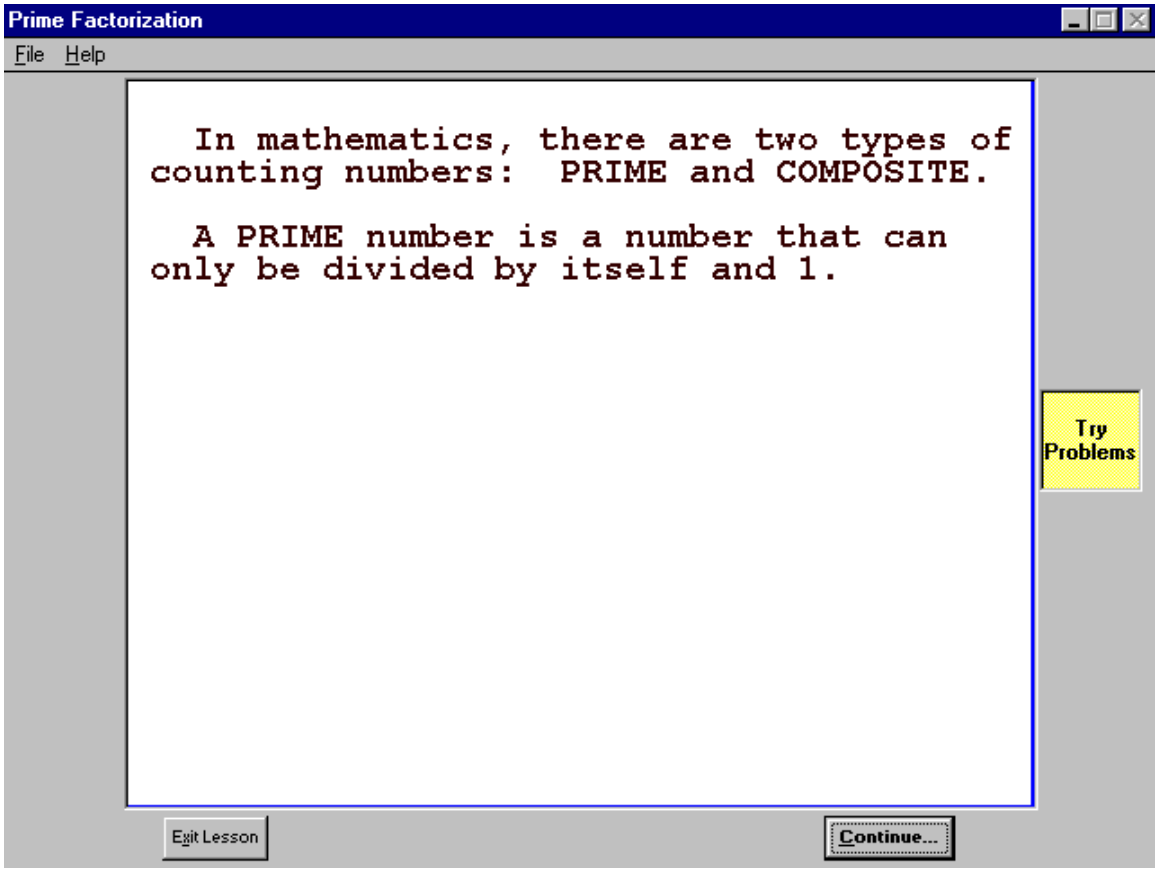
The beginning student is encouraged to work the chapters and lessons in order. But the program gives you the freedom to study the lessons in any sequence you wish.

As you work your way through lessons, and try your hand at solving problems, you may wish to see a summary of how well you are doing in the current session. The RECORDS menu allows you to see a summary of your performance in the current session. It is explained later in this manual.

Working a Lesson

After entering a lesson, you can move through the lesson at your own pace by clicking the "**CONTINUE...**" button at the bottom of the window. To return to the program menu click the "**EXIT LESSON**" button at the bottom of the window. To restart the current lesson use the **File** menu and select "**Restart Lesson**".

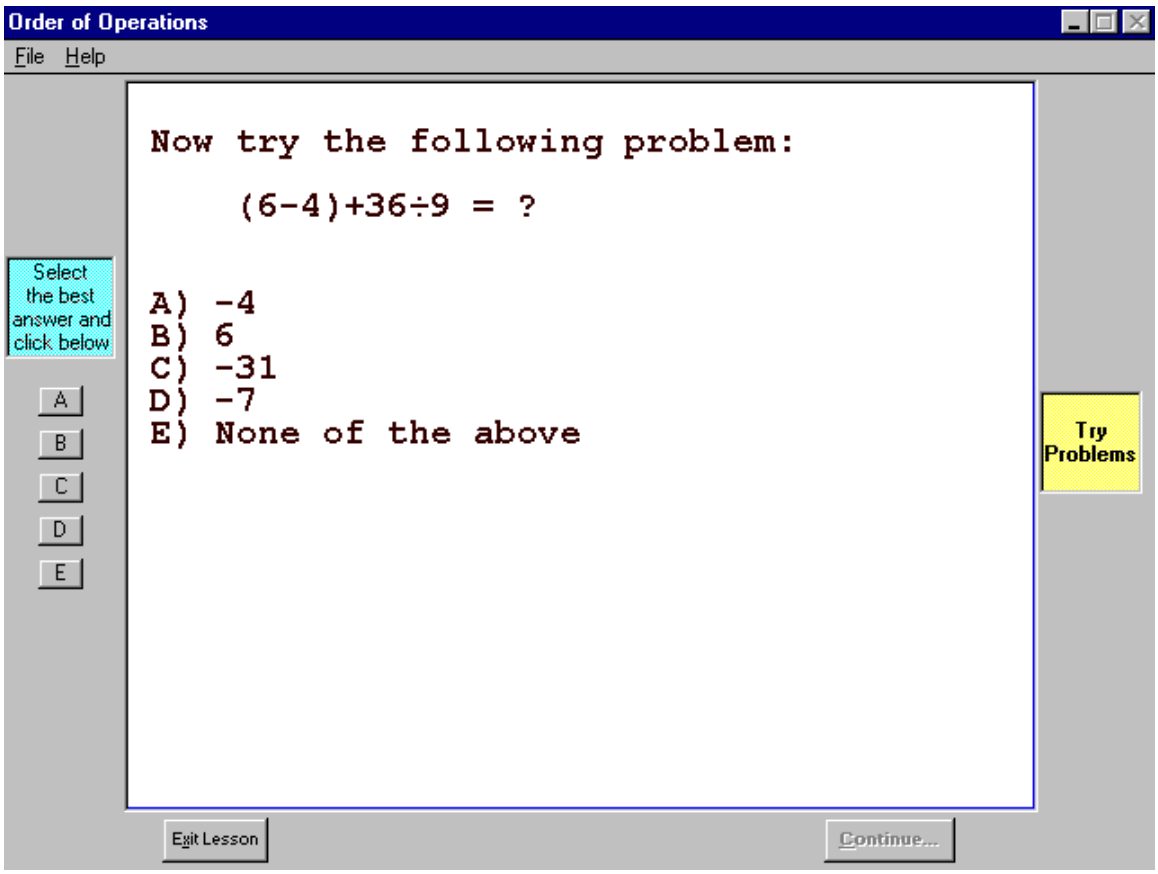
Most lessons have a similar format. First, the main concepts and ideas are presented. Then, one or more examples are presented to illustrate the concepts. After seeing these you will be asked if you would like to see another example. If you click "Yes" you will be shown another example. You will be able to see as many additional examples as you wish. If you click "No" you will be shown a problem to solve.



Here's a tip: When you are in a lesson, if you wish to go straight to solving problems click the "Try Problems" button in the right margin.

Working a Lesson (continued)

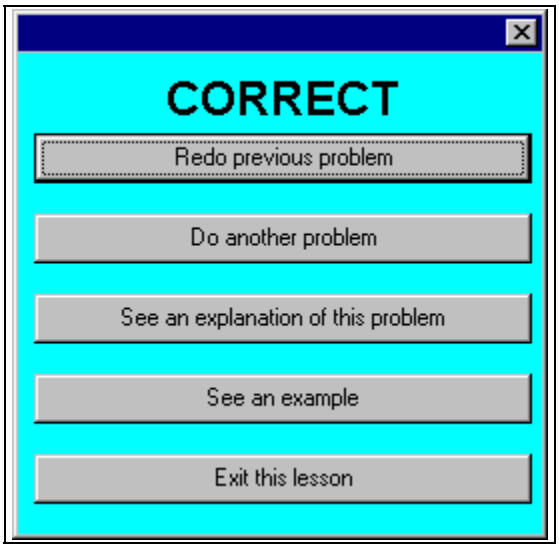
Trying to solve problems is one of the best ways for you to build your math skills, so we encourage you to spend some time on problem solving in each of the lessons you study. After trying a problem you'll have a chance to see the program solve the problem you just tried.



When the program presents a problem for you to solve, the possible answer choices will be displayed in a multiple choice format. To select an answer, click one of the answer choice buttons in the left margin.

The program will respond by telling you if your answer was correct or incorrect. The options available to you at this point are shown below.

Working a Lesson (continued)



After doing a problem, select one of the options shown to the left.

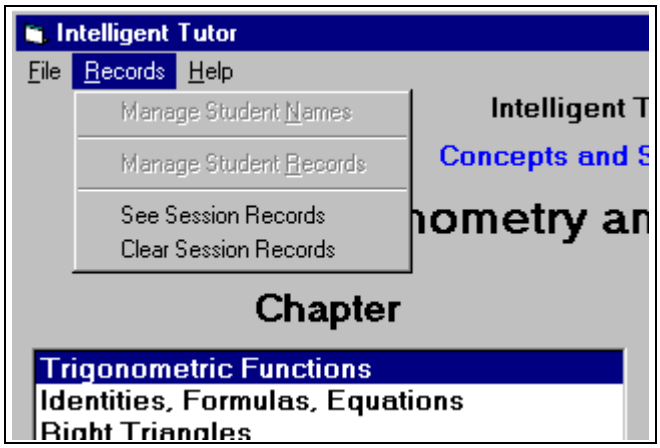
Most of the choices are self-explanatory.

If you did not solve the problem correctly, and would like to see how it can be solved, select the third option choice: "**See an explanation of this problem**".

Summary of How to Navigate a Lesson

In order to do this, then...	Do This
Proceed sequentially through a lesson	Click the "Continue..." button
Go directly to doing problems	Click the "Try Problems" button in the right margin
Select an answer to a problem	Click one of the answer choice buttons (A, B, C, D, E) in the left margin
Restart the current lesson	Choose "Restart Lesson" from the File menu
Return to the program menu	Click the "Exit Lesson" button, or choose "Return to Menu" from the File Menu

Looking at Your Performance in the Current Session



The **RECORDS** menu allows you to see your performance during the current session.

Select "See Session Records" to see your performance.

Select "Clear Session Records" to erase this sessions records.

The screen below shows how the current session's records are displayed.

