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## **Educational Information**

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Background

After starting *Memphis Math*, you use a map to travel from place to place. At each location, you must cross a dangerous path in order to explore various rooms. In the rooms, you can gather ancient Egyptian artifacts, while searching for the pieces of the Sacred Scarab. But watch out for the Guardians of the Scarab!

# Starting Memphis Math

To start *Memphis Math*, double-click the [Memphis Math icon](#) located in the **WordPerfect Main Street** program group.

During the introduction to T.C. King and Memphis, click the right arrow to advance or ESC to skip to Log In. Follow the frames in order, listening for the "clang" to know when to click on the next numbered button.

## Related Topics:

[Log In](#)

[Objective Selection](#)

## Log In

*Memphis Math* can keep track of multiple players. To start the game, each player must log in.



The screenshot shows a window titled "Memphis - Log In" with a textured orange background. On the left is a vertical oval containing an ancient Egyptian hieroglyph. To the right of the hieroglyph is a text input field labeled "Name" containing the text "ERIK". Below the input field are three stacked buttons: "OK", "Exit", and "Edit Players".

You can edit the list of available players from the Edit Players screen.

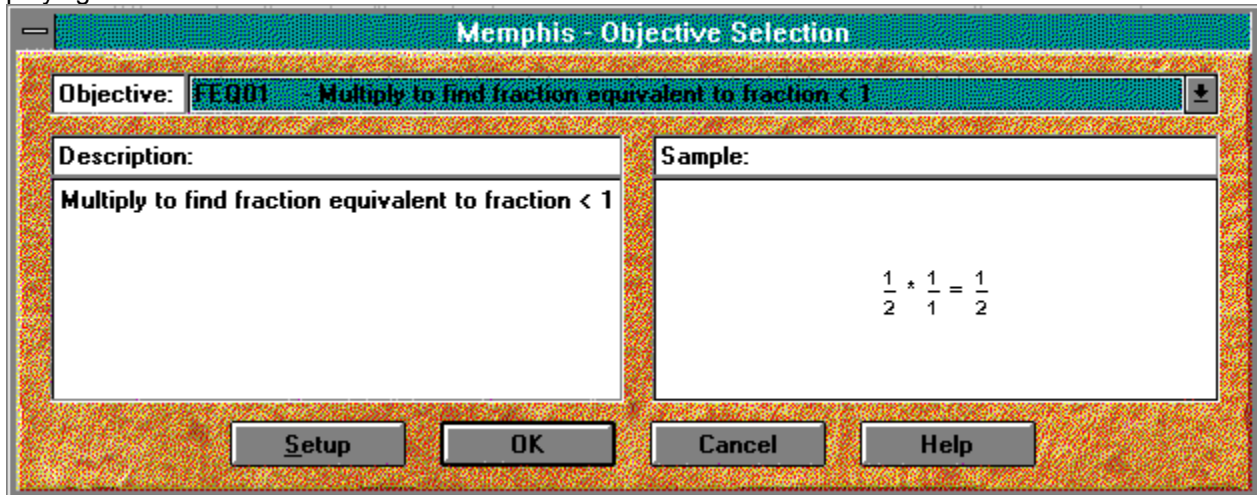


The screenshot shows a window titled "Players - EDIT" with a textured orange background. At the top is a text input field labeled "Name" containing the text "BOB". Below the input field are six buttons arranged in a 3x2 grid: "Previous", "Next", "Add", "Delete", "Save", and "Close".



## Objective Selection

After logging in, each player must choose the type of math problems with which they would like to start playing.



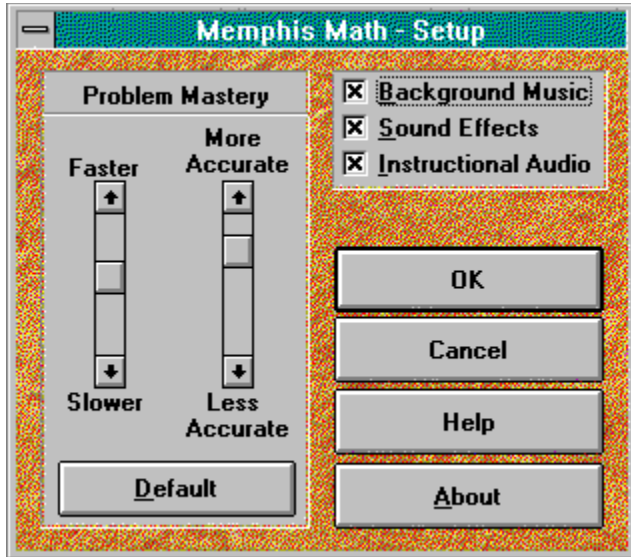
*The Objective Selection screen shows the current objective, its description, and a sample problem.*

*Note: Objectives marked with a double greater than sign (») are those already mastered by the player.*

After selecting an objective, you can begin to play *Memphis Math - Treasure of the Tomb!*

# Setup

To change a player's game Setup from anywhere in the game, click the SET-UP button on the Toolbar at the bottom of the screen.



## Related Topics:

[Problem Mastery](#)

## **Problem Mastery**

Problem Mastery is the speed and accuracy required of a player to master an objective. The default speed requirement varies from objective to objective, while the default for accuracy is 80%. Use Setup to change these requirements for challenged or gifted students.

An objective is mastered when the player meets these requirements for eight of ten consecutive problems in Math Path or in the Rooms. The next problems will come from the next unmastered objective in the Objective list. Mastered objectives are marked with a double greater than sign (») in the Objective list.

# Playing Memphis Math

[The Map](#)

[Toolbar](#)

[Math Path](#)

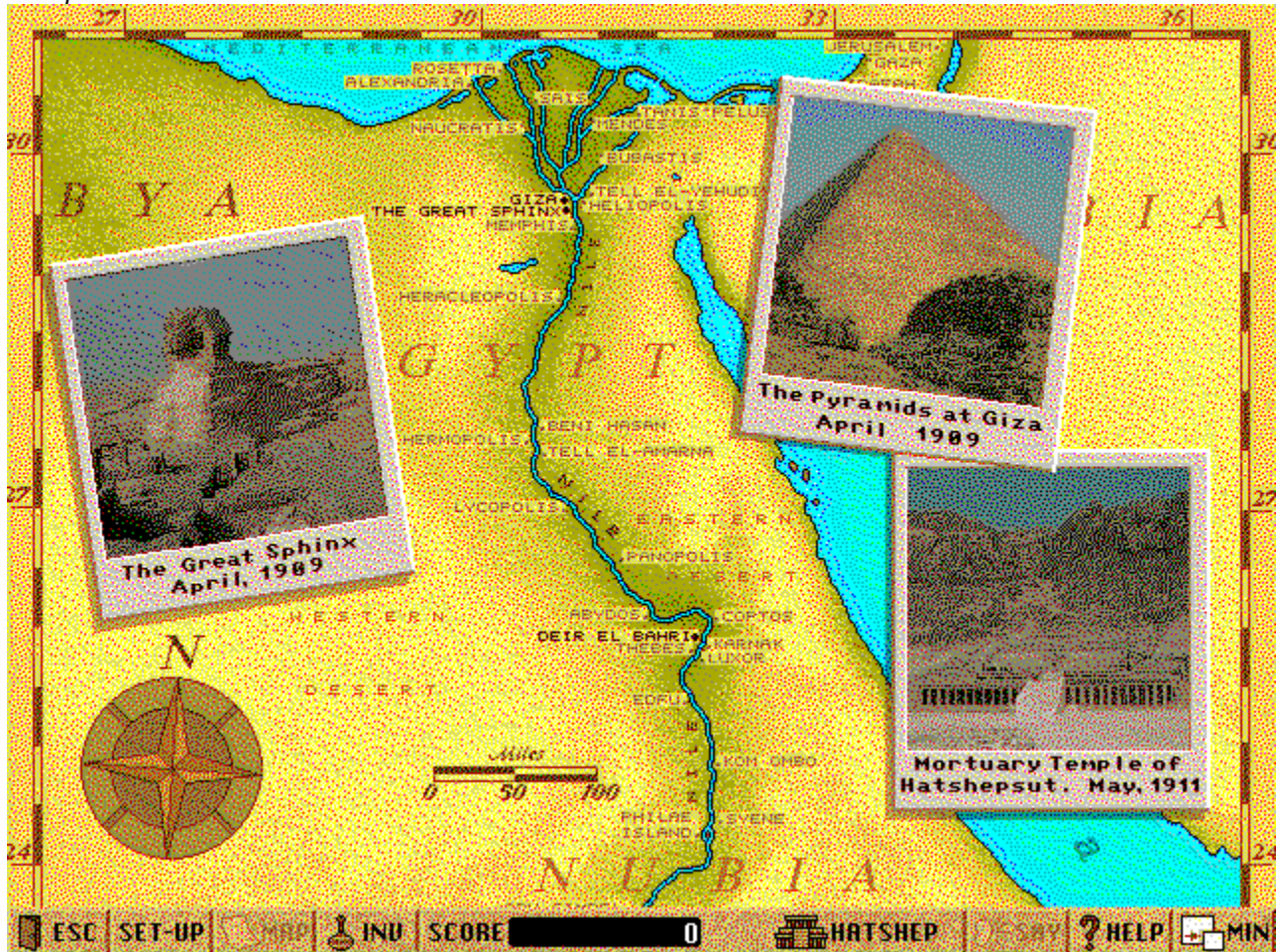
[The Rooms](#)

[Help](#)

[Inventory](#)

## The Map

After you login and select an objective, you are taken to the Map. The Map is the central point in *Memphis Math*.



From the Map, you can travel to any one of three areas:

- △ The Mortuary Temple of Hatshepsut
- △ The Pyramids at Giza
- △ The Great Sphinx

## Toolbar

The Toolbar appears at the bottom of each *Memphis Math* screen. The Toolbar gives you various options and information.

- Exit the current screen and return to the previous level
- Change the game's Setup
- Unfold the Map to travel to another location
- Check your Inventory
- Displays your Score
- Displays current location
- Tells you about an artifact you have collected
- Get Help on the game or the math problems
- Minimize the game



## Math Path

At each location you must first cross a dangerous path covered with snakes, scorpions, or pitfalls, before you can explore the rooms. Choose each step wisely, because the steps you choose will create a math equation. If the equation is valid, you may pass into the rooms; otherwise you will meet your doom!



Your progress through the path is indicated by the white line under the math problem.

After completing ten problems successfully, you reach the end of the path and may begin exploring the rooms. If you don't answer the problems correctly, your path will be blocked. If you don't answer them quickly enough, you will lose a life. Remember, you only have three!

## The Rooms

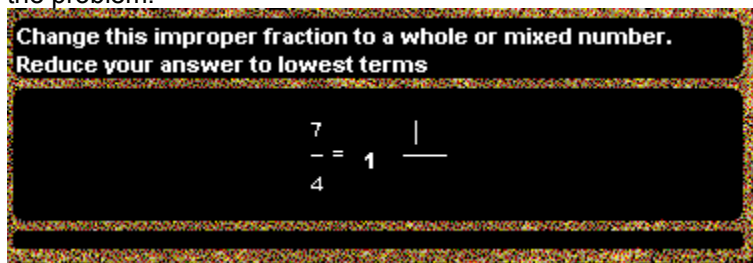
You must explore the rooms at each location in order to find each piece of the Sacred Scarab. While you are in the rooms, your pointer changes depending upon where you position it. Each pointer performs a different function when you click the mouse button.

To pick up an artifact or a piece of the scarab, click the mouse button.

To move to another room, click the mouse button.

When the pointer changes to an hourglass, please wait, as the computer is processing information.

When you click an artifact, a problem and instructions will appear. You must answer the problem correctly to add it to your inventory; otherwise the fragile artifact will be destroyed. While answering the problem, use the up and down arrow keys, the / key, the Space Bar, or the Tab key to move to different parts of the equation, such as the numerator and denominator in this example. Press Enter to complete the problem.



Change this improper fraction to a whole or mixed number.  
Reduce your answer to lowest terms

$$\frac{7}{4} = 1 \frac{\quad}{\quad}$$

*Instructions are displayed with each problem that you have to solve.*

If an answer is incorrect, it will be erased. If an answer needs to be reduced, it will stay visible until it is reduced. You can answer as many times as necessary until the timer runs out.

In order to pick up a piece of the Sacred Scarab, you must defeat an evil Egyptian god in a battle of wits. You must answer at least four story problems to do so. Good luck!

### Related Topics:

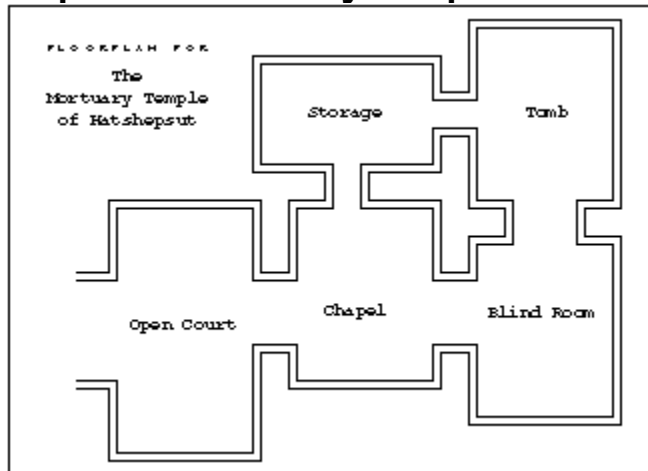
[Maps](#)



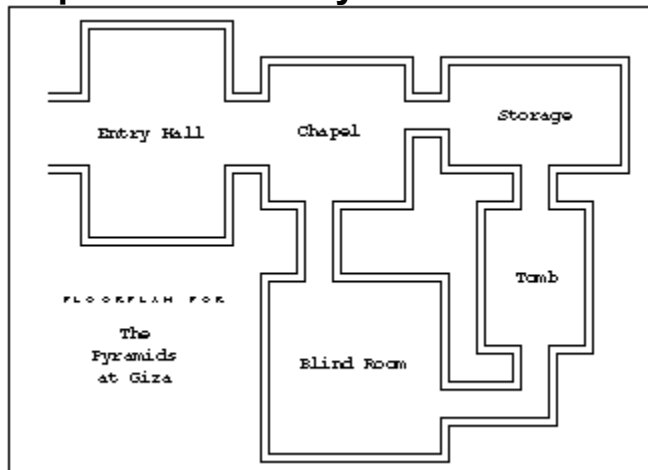
## Maps

To help you avoid getting yourself lost in the rooms, we have provided you with maps of the rooms in each location.

### Map of the Mortuary Temple of Hatshepsut

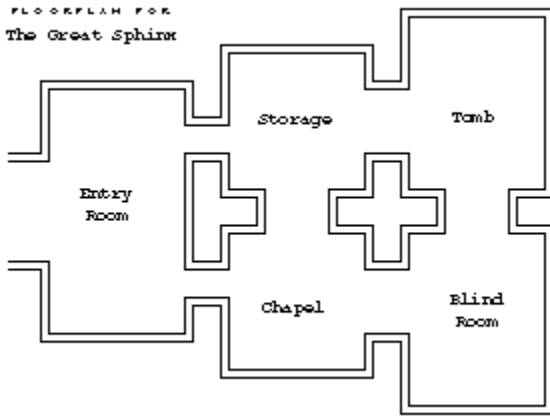


### Map of the Great Pyramid at Giza



### Map of the Great Sphinx

FLOORPLAN FOR  
The Great Sphinx

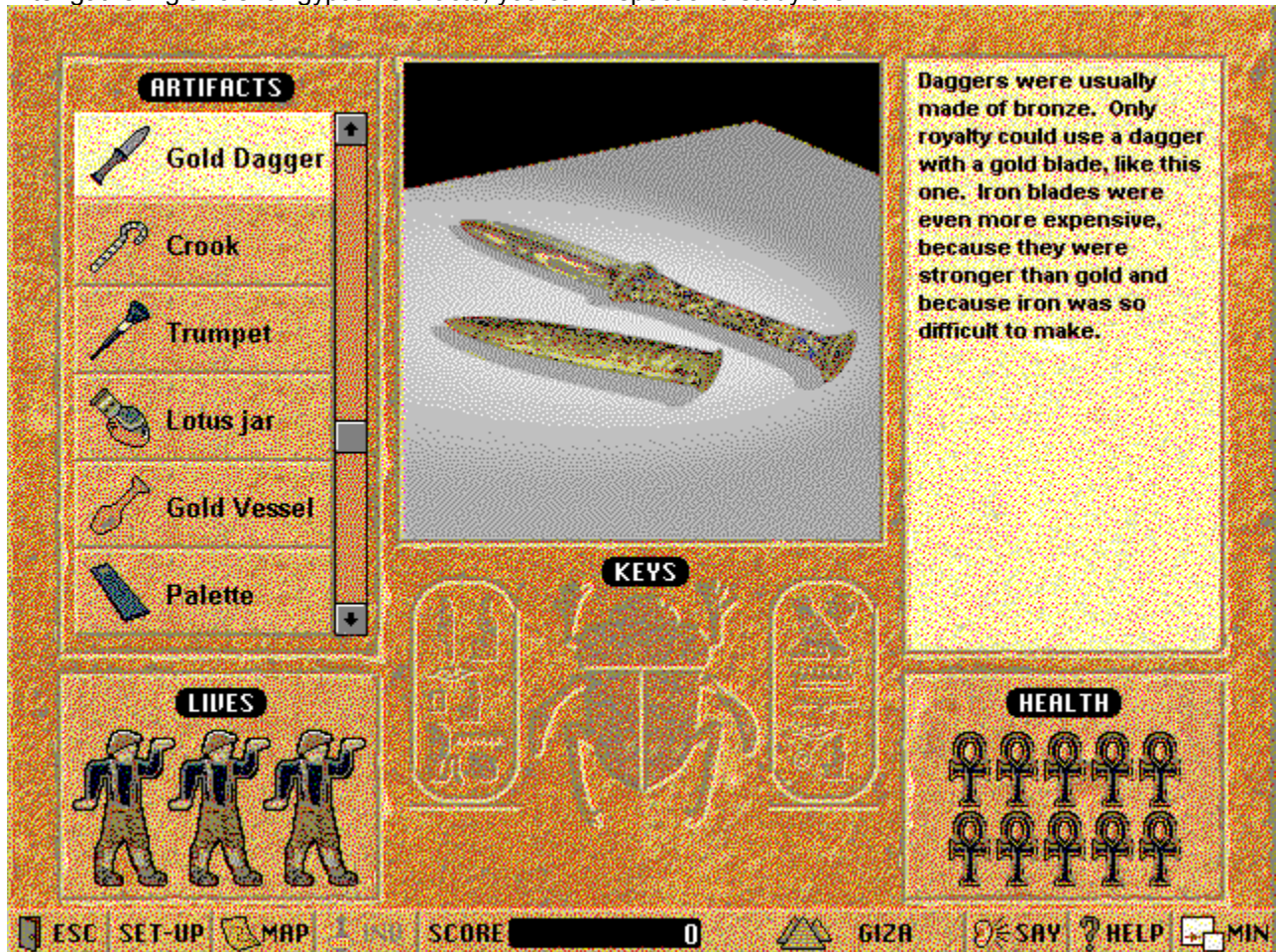


## **Help**

Click on the HELP button for help at anytime in the game. If a math problem is on the screen at the time you click Help, you will receive specific help on solving the current type of math problem; otherwise, you will have access to information about how to play the game.

## Inventory

After gathering ancient Egyptian artifacts, you can inspect and study them.



At the bottom of the inventory screen is the number of lives you have remaining and the pieces of the Sacred Scarab you have found. The ankhs in the bottom right corner represent your health.

Once you have gathered all three pieces of the Sacred Scarab, you will be granted access to the secret Tomb of Tahp Ra-Men. Good luck!



# Math Problem Objectives

The Objective List separates the math problem objectives into groups. Each group has an abbreviation to help you identify which skills the objectives in that group review.

## Related Topics:

[Fraction Objectives](#)

[Decimal Objectives](#)

[Percent Objectives](#)

## **Fraction Objectives**

FEQ	Fractions, Equivalent
FLT	Fractions, Lowest Terms
FCM	Fractions, Comparing
FMX	Fractions, Improper and Mixed Numbers
FOF	Fractions, Finding a Fraction of a Number
FAS	Fractions, Addition and Subtraction
FML	Fractions, Multiplication
FDV	Fractions, Division

## **Decimal Objectives**

DPV	Decimals, Place Value
DAS	Decimals, Addition and Subtraction
DML	Decimals, Multiplication
DDV	Decimals, Division

## **Percent Objectives**

PCT

Percents



# Egyptian Lore Used in Memphis Math

Ankh - A variation of the cross with a circular loop above the horizontal bar. The *ankh* is the symbol of life. The horizontal line stands for man and earth. The vertical line stands for heaven. The circle stands for eternity.

Anubis - Anubis is the jackal-headed god of the West, which is where Egyptian spirits follow the setting sun. Anubis was considered the inventor of embalming, the guardian of tombs, and a judge of the dead. A priest wearing a jackal mask and representing Anubis supervised the mummification process. The Egyptians believed that at the judgment he weighed the heart of the dead against the feather of truth, worn by Osiris. He is represented as jackal-headed, because these animals ravaged the desert graves in ancient times.

Giza, pyramids at - The pyramids at Giza, Egypt are among the most famous pieces of architecture in the world. The Great Pyramid was built as the final resting place of the pharaoh Khufu in about 2570 BC. This pyramid, almost 480 feet (146 m) high, was built without the use of cranes, pulleys, or lifting tackle, and archeologists are still not certain how that was accomplished.

Hatshepsut, Mortuary Temple of - The temple of Hatshepsut is a rock-cut tomb and mortuary temple built circa 1478 BC at Dayr al-Bahri near Thebes. It was designed by the royal architect Senemut for Queen Hatshepsut. The temple consists of three colonnaded terraces connected by ramps. The surrounding area was planted with trees and flowers during the queen's reign and for many years thereafter.

Horus - The god of the day, bringing sun and sky, light and goodness. Horus is usually depicted as a falcon or a falcon-headed man. He is the son of Osiris and Isis. He avenged his father's murder by killing his evil uncle Set.

Isis - Goddess of the earth and moon, wife and sister of Osiris and the mother of Horus. She is also the goddess of fertility, motherhood, and faithful marriage. She wears cow horns on her head, or a throne which is the hieroglyph of her name.

Osiris - God of the underworld, judge and ruler of the dead. Murdered by his brother Set, he was magically brought back to life by his wife Isis as the first mummy. He is usually shown as a bearded mummy with green skin, holding the crook and the flail of the pharaoh.

Scarab - Common name for any of various large, bright-colored beetles. A species of scarab, the tumblebug, was held sacred by the ancient, sun-worshipping Egyptians, who regarded the beetle as a symbol of immortality. This scarab beetle digs under the ground as though it were burying itself, and then reappears, so it came to symbolize rebirth. It is also believed that a scarab beetle pushes the sun around the sky, causing an endless cycle of dark and light. Amulets, seals, and rings in the shape of the beetle came to be known as scarabs.

Sebek - The Egyptian crocodile god. Crocodiles were sacred to the Egyptians, who kept them as pets and sometimes made them into mummies after they had died. This reverence for the crocodile and worship of the crocodile god Sebek was one of the earliest manifestations of religion in Egypt.

Sekhmet - Sekhmet is the Egyptian goddess of war. She has the head of a lion. She represents the evil powers of the sun, which is usually shown on her head next to a snake.

Set - The evil god of darkness, thunder, and storms. He was the son of Geb (earth) and Nut (sky) and brother of Osiris, the second king of the Earth. Set hated his brother and killed him, but was later defeated by Osiris' son Horus in a great battle.

Sphinx, the Great - In ancient Egypt, sphinxes were statues representing deities, with the body of a lion and the head of some other animal or of man, frequently a likeness of the king. The most famous of all Egyptian sphinxes is the Great Sphinx of Giza, near the pyramids. Dating from before 2500 BC, the Great Sphinx is about 66 feet (about 20 m) high and about 240 feet (about 73 m) long.

Thoth - The god of history, writing, magic, and wisdom. Thoth is said to have invented hieroglyphics.

He is shown with the head of a sacred ibis, a long-legged, long-necked wading bird, much like a stork or heron, or a baboon, holding a palette and writing with a reed pen. Thoth is purported to have written the Hermetic Books, a collection of metaphysical treatises and dialogues dating from the middle of the first century AD to the fourth century AD.

Udja eye - A hieroglyphic symbol consisting of a human eye and eyebrow to which are added the markings of a falcon. It means "sound" or "healthy" and represents the god Horus, being a symbol of the eye he lost to Set in battle, but which was later restored by Thoth. The eye also helped bring Osiris back to life.

## No Sound

No sound in *Memphis Math* can be the result of a few different things. Follow these steps to enable the sound.

- △ Make sure that **Sound Effects, Background Music, and Instructional Audio** are selected in Memphis Setup.
- △ If you are still not getting any sound, make sure that you have your Windows sound drivers loaded correctly in the **Drivers** section of the **Control Panel**. Also check to make sure that your speakers are hooked up correctly and turned on. Refer to your sound card manual for information on checking this. If you have checked all the above, follow these steps to test your Windows sound setup:

1. Open the **Main** program group from the **Program Manager**.
2. Open the **Control Panel**.
3. Double-click the **Sound** icon.
4. Make sure that a file is selected (highlighted) and that **System Sounds** is selected (an X in the check box).
5. Click the **Test** button.

If you don't hear any sound, consult your sound card user's manual as your sound card is not set up correctly for Windows.

If you do hear sound, then your sound card is set up correctly for Windows.

- △ If you still do not hear any sound in *Memphis Math*, check your resources with the following steps:
  1. Click **Help** at the Windows **Program Manager**.
  2. Click **About Program Manager...** from the menu.

The percentage of resources available in Windows appears at the bottom of the **About Program Manager** window.

If the percentage of resources available is less than twenty percent, *Memphis Math* does not have enough system resources available to play the sound files. To free up more resources, you could shut down other applications that are running, increase your swap file size, or increase your computer's memory. Refer to your Windows User's Guide for further information on these or other actions intended to free more resources.

## Sound/Picture Skipping

If the sound is stuttering or the video seems to skip frames, adjust your Video for Windows™ settings by following these steps:

1. Open the **Main** program group.
2. Double-click the **Control Panel**.
3. Double-click the **Drivers** icon.
4. Double-click **[MCI] Microsoft Video for Windows**.
5. De-select (no X) the **Skip video frames if behind** check box.
6. Click the **Set Default** button.

## **No Background Sound (ProAudio Spectrum)**

You may not hear background music during game play while using the MediaVision™ ProAudio Spectrum sound device. If this occurs, update to ProAudio Spectrum driver version 1.45 or later.

## Background

Waterford software is focused on teaching reading, writing, and math skills. Waterford software has won numerous awards, including the Software Publishers Association's coveted Codies Award for Best Elementary Education Program, the Parent's Choice Award, and the Technology & Learning Award of Excellence. Classroom editions of the software are networkable and include a sophisticated teacher management system.

Dr. Dustin Heuston, a career educator, college professor and headmaster founded the Waterford Institute in 1976. Waterford is dedicated to using computer technology to give all children the finest education possible. Dr. Heuston and the Institute pioneered the first-ever educational videodisk. The Institute also operates the 750 student Waterford School, and uses the school as a living research laboratory for educational technology. Recently, the U.S. Department of Education rated the Waterford School as "one of the twelve best schools in the nation for academic and technological excellence."

Waterford design teams are led by experienced teachers, and include instructional designers, graphic artists, programmers, educators, and recording musicians. New products are tested extensively for educational value and appeal by the Waterford School's 750 children in classroom and home settings. Waterford has also operated computer learning systems in more than forty inner city schools in New York City and elsewhere.



Type in your name and press ENTER to begin the game.

Click on Exit to leave Memphis Math.

Click on Edit Players to change the list of available players.



Click on Previous or Next to scroll through the list of players.

Click on Add or Delete to modify the list of players.

Click on Save to keep your changes to the list.

Click on Close to leave the Edit Players screen.

Click on the down arrow to open the list of available objectives.

Select the objective you want and press ENTER.

Click on Setup to change the current game's setup.

Move the scroll boxes up and down to increase or decrease the speed and accuracy required of the player.

Click on the Default button to return Speed and Accuracy to their original values.

Click on Background Music, Sound Effects, or Instructional Audio to turn these options on or off.

Click on the photo of one of the three locations to travel there.



SET-UP







SCORE 0









Click on the steps to create a valid math problem.

The farthest row finishes the problem.

The middle row adds the second operand.

This row adds the first operand.







Type in the answer to complete the equation.

Use the up & down arrow keys, the / key, or the Space or Tab keys to move to different parts of the equation.

Scroll through your inventory list by moving the thumbwheel up and down with the mouse.

Double click on the picture of the item to make it full-screen then click on it again to reduce it again.

Click on the SAY button to hear the description of the item.

































