



# MathPad for Windows Workshop Tutorial

Windows

## Introduction

MathPad is an ideal tool for students who have difficulty writing math computations with pencil and paper. Students use MathPad to solve basic addition, subtraction, multiplication and division problems directly on the computer. The National Council of Teachers of Mathematics (NCTM) promotes math computation as a way of understanding how to construct number meanings from real life situations. MathPad allows students to practice math computations, enter math algorithms and solve them independently. Only one problem is presented at a time to avoid distractions. Using this tutorial you will explore the features that allow students to successfully access MathPad to enter math problems check their work using the regular keyboard, mouse, IntelliKeys or a switch.

## Getting Started

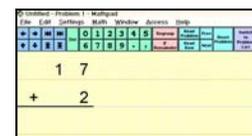
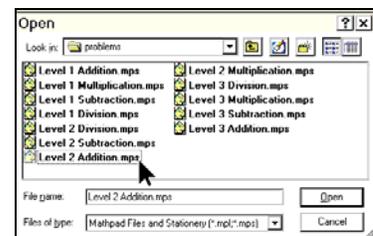
MathPad ships with 12 sample Problem Lists organized according to the level of difficulty. You will start by exploring the sample files and then create your own problem list.

### 1. Opening a Sample Problem List

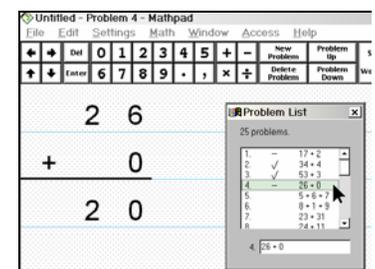
- Inside the MathPad folder on the C:drive are overlay files if you wish to re-print or customize overlays for your students, there is also a folder with pre-made Problem Lists where you can develop individual student files.
- Open MathPad from the **Start** menu. The path is:  
Start Menu/programs/ IntelliTools/MathPad
- Go to the **File** menu and select **Open Problem List**. Choose Level 2 Addition.
- Go to the **Settings** menu and choose **Default Settings**.
- Using the mouse and regular keyboard enter the answer to the problem. Notice that the cursor automatically moves to the left after a number is entered. This is due to the setting called Auto-navigation.
- Note the Toolbar on the top of the screen.
- Select **Next** to go answer another problem. Answer the next 5 problems. Be sure to answer some problems correctly and some problems incorrectly.
- To check your answers select **Switch to Problem List** from the Toolbar. You can review right away which problems have been done correctly. Correct problems have a ✓ and incorrect problems have a dash -.



C:/tools/Mathpad



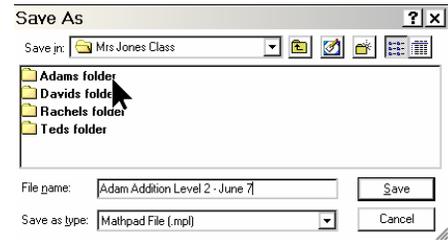
Toolbar



## 2. Saving Files for Student Portfolios

This file was originally saved as Stationery. Stationery files always open as 'Untitled' so each student can be presented with the same list and then renamed by the user. Files can be stored inside the student's folder. This enables you to build a portfolio for each student.

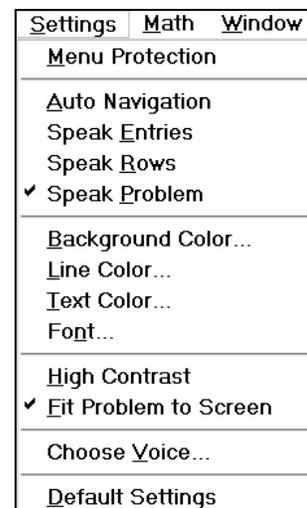
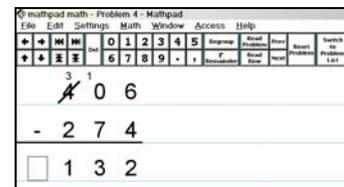
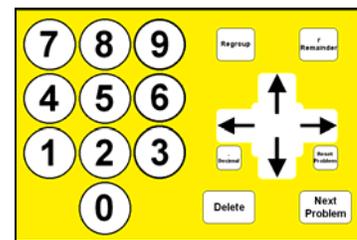
- You can also create a folder for your class and within that folder, create individual folders for each student.
- Select the **Create New Folder** Icon. Name your file so you can identify the content, and save it within your folder.



## 3. Using the MathPad Regular Overlay

MathPad ships with a dual sided overlay. The MathPad for Windows Standard or Regular Overlay allows students to input answers and go to the next problem. The other side, MathPad for Windows Advanced Overlay allows students to enter their own problems and check their answers independently. You will access MathPad using the both overlays. More complex problems require students to regroup. You will explore the navigation feature of MathPad that assists students as they learn to regroup when they borrow and carry numbers.

- Go to the **Access** menu and select **IntelliKeys Regular Overlay**. Place the MathPad Windows Standard Overlay on IntelliKeys.
- Go to **File** and select **Open Problem List**. Choose Level 3 Subtraction and click on **Open**. This list has problems that require students to regroup.
- Go to the **Problem List** and choose problem number 8. Use the overlay to solve this equation. After you put in the '2' for the ones column the highlight box moves to the left.
- Since you can not subtract from 7 you will need to regroup. Press the **Regroup** key on your overlay.
- Notice that the student is prompted through the regrouping process. Press 3 and complete the problem.
- Students can use the arrow keys to regroup. Go to the **Settings Menu** and turn off **Auto-Navigation**. The check mark will disappear.
- Go to the **Math** menu and choose **Reset Problem**.
- Complete the ones column, 4 from 6 is 2. Next, use the arrow keys on the overlay to move to the number 4. Press **Regroup** on the overlay and complete your problem.
- Select the **Settings Menu**. Explore the options available for customizing the visual and auditory feedback. Auditory feedback ranges from speaking the entire problem to no feedback at all. Try each of the options as you work on the next few problems.



## 4. Using the MathPad for Windows Advanced Overlay

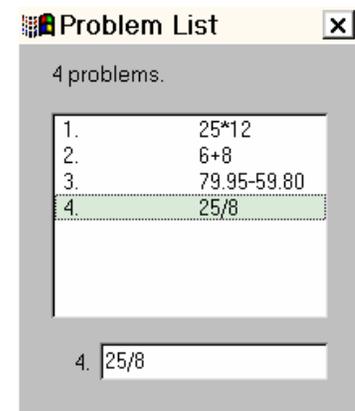
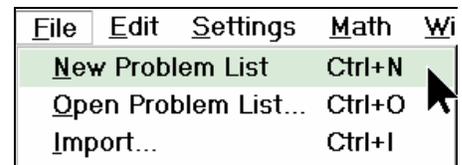
The MathPad for Windows Advanced Overlay is on the flip side of the Standard Overlay. Once this overlay is sent to the IntelliKeys, the user has access to the Problem List Window. This overlay enables students to enter their own problems. You can also enter problems using a mouse and the keyboard, or a switch.

Students often are asked to solve word problems and need to create the math equations on a separate piece of paper. MathPad provides the work environment for creating and solving custom math equations. Using the MathPad for Windows Advanced Overlay you will create the equations and solve the following special MathPad problems.

*Using MathPad, create the equations and answer the following questions.*

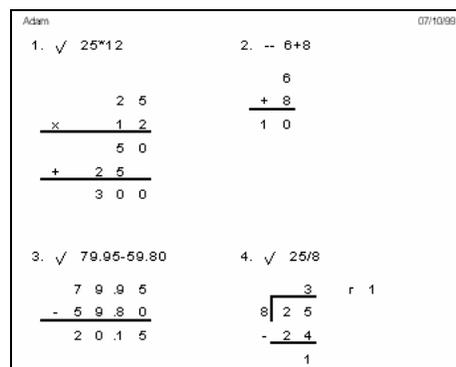
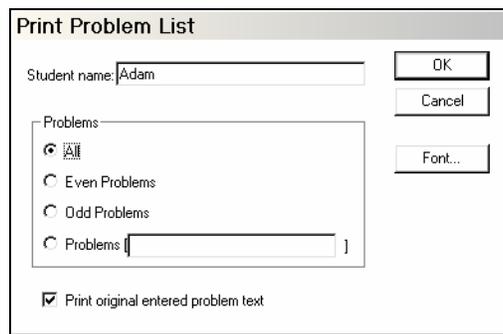
- *MathPad includes 12 Sample Problem lists. Each list has 25 problems. How many sample problems are there all together?*
- *IntelliTools has keyguards for each of the six standard IntelliKeys overlays. The regular MathPad overlay is designed to work with the Numbers Keyguard and the MathPad Advanced Overlay can be used with the Alphabet Keyguard. There are also 8 keyguards for custom designed overlays. How many keyguards are available all together?*
- *MathPad sells for \$79.95 a single copy. A Five Pac is \$299 or \$59.80 per copy. How much money do you save on each copy of MathPad when purchased in the Five Pac?*
- *Only one problem is viewed at a time. You can print from 1 to 8 problems per page, corrected with all work shown. If you choose 8 problems per page, how many pages will it take to print 25 problems?*

- Go to the **Access** Menu. Select **IntelliKeys Advanced Overlay**. Turn the overlay to the side that says Windows Advanced Overlay.
- Go to the **File** Menu and select **New Problem List**. This will open a new file for entering these math equations.
- Use the number keys on the overlay to enter  $25 \times 12$ . After you input the numbers for each equation, select **Enter** on the overlay.
- If you make a mistake use delete or press the **Delete Problem** key to delete the currently selected problem on the Problem List.
- To complete the computations, use the arrow keys to go to the first equation. **Press Switch to Worksheet** on the overlay.
- Complete the computations and check your work using the Overlay. *Note: The double arrows on the Toolbar and overlay allow you to quickly go to the top or bottom of the page.*
- Students can complete their computation and then use IntelliTalk to write their findings in their daily Math Journal.



## Printing Options

- MathPad allows you to print just the problems accomplished each day. You decide the range of problems to print. If the student has only done 3 problems, you can print problems 1-3. The next day you might choose to print problems 4 to 8.
- If you are connected to a printer while using this tutorial you can choose to print a selected number of problems. Go to **File** and choose **Print**. Notice that you can decide the range of problems to print.
- The sheet of work printed includes all of the student's work and a check if the problem is correct. If the problem is correct then there is a ✓. If the problem is not correct there is a dash -.



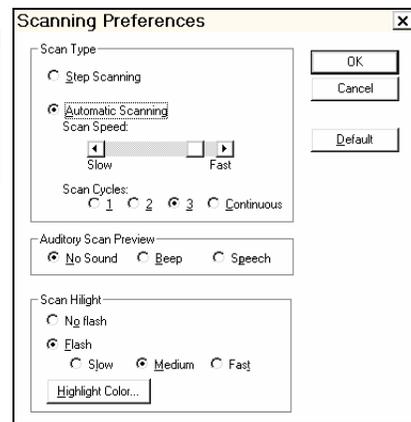
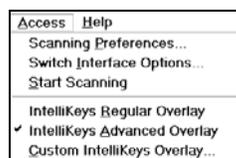
## Using MathPad with a Switch

MathPad is designed to work with automatic scanning, as well as with Step Scanning. A keyboard key or mouse button can be used as a switch or an external switch interface can be utilized. This allows students to work collaboratively in an inclusive setting.

MathPad Toolbar



- Select the **Access** menu. Explore the **Scanning Preferences** and **Switch Interface Options**.
- Select the **Reset Problem** button on the **Toolbar**.
- Go to the **Settings** menu and select **Auto-navigation** or choose **Default Settings**.
- Press a switch attached to the IntelliKeys and solve the problem using the switch. Change the speed of the scan by pressing a number from 1 (slowest) to 9 (fastest) on the standard computer keyboard. The default is about 6. Hit Escape (esc) on the standard keyboard to stop scanning.



*InfoUse developed MathPad in association with The Center for Accessible Technology and in collaboration with IntelliTools. Funds for this project were made available by the National Institute of Child Health and Human Development. MathPad is available for both Macintosh and Windows.*