



MATH DITTOS 2

Fact Controlled MULTIPLICATION for Special Learners

Version 3.0.1

The **MATH DITTOS 2** series is a unique, fact supported approach to teaching computation. Each page in the series presents a limited number of problems with plenty of workspace. The facts necessary to complete each problem are always presented on the page in a fact reference and practice section.

The **MD2** series currently consists on three "workbooks" published as computer documents in ClarisWorks and Adobe PDF format.

- **MATH DITTOS 2: Fact Controlled ADDITION & SUBTRACTION for Special Learners** teaches addition and subtraction simultaneously using a unique "cluster" approach.
- **MATH DITTOS 2: Fact Controlled MULTIPLICATION for Special Learners** presents multiplication in a careful, step-by-step, fact supported approach.
- **MATH DITTOS 2: Fact Controlled SUBTRACTION for Special Learners** can be effectively used for initial instruction in subtraction with fact support and word problems. It is quite effective for the reteach that older students beginning long division frequently need.

The concept behind the MD2 series is the same one we've used for years in reading, using a controlled "vocabulary." The vocabulary in this context is the basic multiplication facts. Each page is limited to only the facts (much like new vocabulary) presented in the factbar or factstrip.

The MD2 series is also unique in that it is published as computer documents. You buy it once (updates and upgrades are always free to registered users) and use it as long as much as you wish. Annual orders, late or cancelled order, stacks of workbooks taking up space, one workbooks short simply don't apply to this material!

USE

MATH DITTOS 2: Fact Controlled MULTIPLICATION for Special Learners works best when used with or as a fact acquisition

MATH			
Name _____			
Date _____			
Multiplication Facts 2's & 3's			
233 x 6	716 x 3	417 x 2	
385 x 3	322 x 5	232 x 9	
323 x 7	209 x 3	538 x 2	
906 x 2	223 x 8	323 x 4	

program. Each page contains fact bars to be completed and checked first. They may then be effectively used for reference while completing the practice problems. Facts are presented from the 1's up to the 9's. Each series of pages presents only 2 sets of the facts (ie., 2's and 3's, or 7's and 8's), so that there is only one "new" set of facts and one review set per page. Review pages contain several sets of facts, including the 2 most recently taught fact sets. Inverse facts (ie., 2x6, 6x2) are included in the fact progression. Besides avoiding teaching each fact separately, this approach leaves fewer and fewer new

facts to be learned as the student progresses through the book and into increasingly difficult computation.

Preteaching each page is fairly easy. A quick examination of the page in question usually reveals what is new. Completion and checking of factbars should precede completing the practice problems.

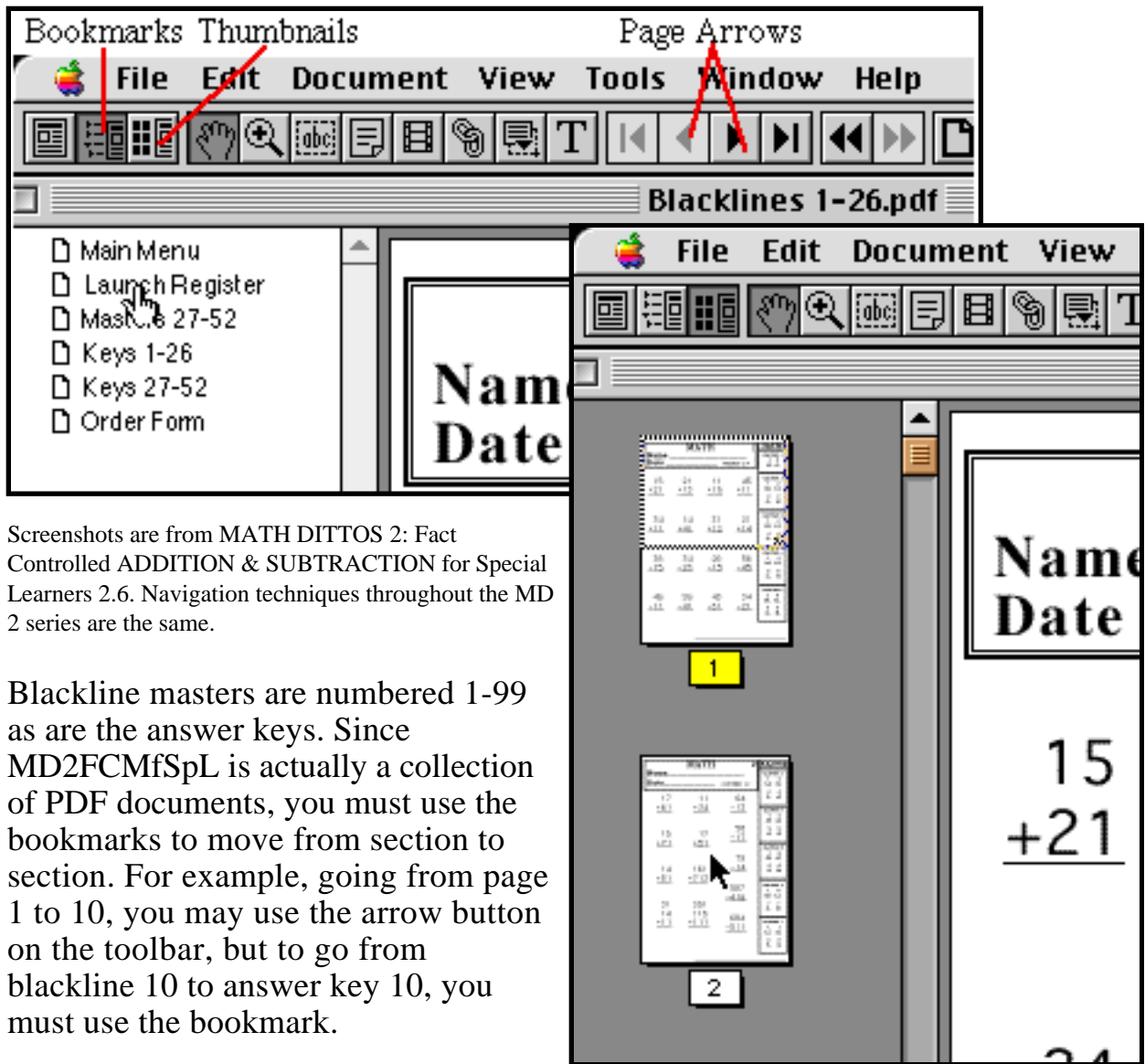
The pages are designed to be used sequentially, if appropriate, 1-99. Using just the one-digit pages (the first four pages of each set) is also an effective approach for students not yet ready for the complexities of 2 and 3-digit multipliers. More advanced students may not need to complete every page.

The pages in this series are purposely limited to very few problems per page. This was done so that students with ADHD could tolerate and complete a daily assignment. Many of my non-ADHD students zip through several pages a day.

FACTS	
9 x3	3 x9
8 x3	3 x8
7 x3	3 x7
6 x3	3 x6
5 x3	3 x5
4 x3	3 x4
3 x3	3 x3
2 x3	3 x2
1 x3	3 x1
0 x3	3 x0

Navigation

Navigate through the pages of MD2FCMfSpL with the forward and backward arrow keys, or with Thumbnails. General areas can be selected through the Bookmarks. Select the page view from the View menu.



Screenshots are from MATH DITTOS 2: Fact Controlled ADDITION & SUBTRACTION for Special Learners 2.6. Navigation techniques throughout the MD 2 series are the same.

Blackline masters are numbered 1-99 as are the answer keys. Since MD2FCMfSpL is actually a collection of PDF documents, you must use the bookmarks to move from section to section. For example, going from page 1 to 10, you may use the arrow button on the toolbar, but to go from blackline 10 to answer key 10, you must use the bookmark.

A Free Unsolicited Word for Acrobat

Although I've worked with and beta-tested many programs, I've rarely found a program as easy to learn and trouble-free as Adobe Acrobat 3.0. If you must assemble documents in a cross-platform format, this one will do the job well!

ORGANIZATION

Facts are grouped in pairs for instruction, beginning with the 1's and 2's, then the 2's and 3's, the 3's and 4's, and so on. Each fact series is presented initially with one-digit multipliers. Inverse facts are presented on succeeding pages. Two and three-digit multipliers are presented after the first four pages of one-digit practice.

What it's not!

The MD2 series does not currently have a "teachers' guide" filled with goals, objectives, and references to other materials and activities. While a desirable element, simply getting the product out has been the first goal for this revision. This book makes no attempt to link computational skills to real-life math. While a critical skill, these materials address that first step--computing. An attempt at a word problem approach has been employed in MATH DITTOS 2: Fact Controlled SUBTRACTION for Special Learners.

What's new in version 3.0?

- An all new task analysis of the steps in multiplication is employed.
- Pages are restricted to one new step per page.
- Platform Independent: Adobe Acrobat .pdf documents--use free Acrobat Reader that is available for many platforms (Mac, Win 3.1, Win 95, etc.)
- Fact support on all pages of the basic blackline worksheets.
- Grid overlays for keeping answers organized in 2 and 3-digit multiplier problems.

NEW IN CLARISWORKS VERSION ONLY

- Macintosh TrueType fonts only in the ClarisWorks for Macintosh version (Times, Helvetica, and Geneva--all normally installed on any Mac running System 7, 7.5, or 8).
- Removable grid overlays for keeping answers organized. (Actually, there has been a grid overlay master for some time in MD2FCMfSpL. I just put them on many of the worksheets this time. If you don't want them, select and delete!)
- Flash cards that parallel the organization of MD2FCMfSpL. (Actually, I wrote them for this release, but "snuck" them into the registered version of 2.3 (the last public release in the old series).

What do you get? (PDF Version)

Blackline Masters

- 99 blackline masters comprise the basic package. Worksheets move slowly and logically through the steps in multiplication. Each page adds only one new item to the task analysis.

Compete Answer Sheets

MATH		16	
Name	Date	Multiplication Facts (16-15)	
158	904	322	
x 3	x 2	x 5	
474	1808	1610	
158	904	322	
x 20	x 30	x 40	
3160	27120	12880	
158	904	322	
x 23	x 32	x 45	
3614	28928	14490	
158	904	322	
x 23	x 32	x 45	
3614	28928	14490	

- A set of 99 answer sheets is included. A pet peeve of mine over nearly 30 years of teaching has been the absence of complete answer sheets for multiplication and division worksheets. If publishers would produce complete answer sheets, teachers could do what we've all been trained to do, diagnose and teach. Wherever possible, I have endeavored to incorporate complete answers into the MD2 series.

MATH		34	
Name	Date	Division Facts (34-33)	
54)2410	54)4513		
44 r34	83 r1		
54)2410	54)4513		
44 r34	83 r1		
54)2410	54)4513		
44 r34	83 r1		
54)2410	54)4513		
44 r34	83 r1		
54)2410	54)4513		
44 r34	83 r1		

Spare Parts Folder (only in ClarisWorks versions)

- Small flash card masters are included for duplication and student use. Instructions for duplication are included in a separate *Read Me* file in the Small Flash Card folder.
- Large flash card masters are also included. I use these for testing and group work.
- Speed Drill Worksheets are included. These are for speed drills and fact testing. They are easily modifiable to vary the problems when retesting at the same level is necessary. The original Speed Drill Worksheets (multiple fact pages) are now integrated with 10 new single fact pages.
- "No Fact" pages are pages with restricted facts, but no fact bars.
- A master of grid overlays is included. Most pages in the MD2 series that might require these overlays already have them on the specific page. An exception is the review pages. You can cut and paste these onto any of the blackline masters. Occasionally, a little touch-up is needed after pasting. For some reason, graphics sometimes misshape in ClarisWorks from pasting.
- At least two factstrip masters are included. These can be useful in constructing other worksheets.

What's not in version 3.0?

The color worksheets included in previous releases are gone for now. The sheer size of this release has taken all my time to edit. I'd love to add some color, even use it in the organizational scheme. But the time required simply doesn't exist.

Adobe Acrobat Reader Versions

The entire MATH DITTOS 2 series is now distributed in Adobe's .pdf format only. This means that the files can be used on a variety of platforms, including Macintosh, Windows 3.1 or 95, etc. The Acrobat Reader is a free application, so you may use the series without regard to the application program that created the documents (well...you gotta' have the Acrobat Reader, but what the heck, it's free).

Editable versions in ClarisWorks 4.0, which carry a number of attractive extras, are still available in Macintosh format only.

Printing Notes

I print to an Epson Stylus Color printer with no problems. I also use a LaserWriter Select 310 at school. Sometimes it is necessary to adjust the print darkness DOWN, or to a lighter setting.

- Answers are shown in red on the answer keys, but print well on black and white printers.
- Grids may not show unless color/grayscale is selected under Print Options on some black and white printers.
- Files are purposely offset to the right so that copies can be punched to be placed in a binder.

LEGAL STUFF

MATH DITTOS 2: Fact Controlled MULTIPLICATION for Special Learners is shareware. Shareware is material that can be tried, without charge, for up to 30 days. After that period, you are expected to either pay the shareware fee or delete the materials from your hard drive. MATH DITTOS 2: Fact Controlled MULTIPLICATION for Special Learners is protected by U.S. Copyright registration, ©1995, 1997 Steven L. Wood. This PDF distribution version may be freely copied and distributed in its original form with all accompanying documentation. Registered users are granted the right to modify these materials for their own use only. Users may also generate paper copies for their own individual classroom use. Upon registration of your copy of MATH DITTOS 2: Fact Controlled MULTIPLICATION for Special Learners you are granted a license to install the above on one computer at work, and another at home. (I always thought Microsoft's licensing made sense.) Distribution to a whole staff, school, or system is prohibited. Site licenses are available.

REGISTRATION



Paying for **MD2** with the included Register application is fairly simple. Open the Register program (you may click on the icon at left) and enter your name, email address, mailing address, and the number of licenses you desire for each program you wish to purchase. If paying with Credit Card, you may email the information by copying the information from Register and pasting it into an email message to: sales@kagi.com. By U.S. Mail, simply save and print the data (your credit card numbers are bar coded for security) and mail to:

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USA

Kagi promptly informs me of your payment and I mail the ClarisWorks version, or the PDF version password. I really attempt to get passwords out the same day they are received.

IMPORTANT:

You have a choice in registering. If all you need is the PDF version, simply order that version for \$10.00. If you want or require the ClarisWorks editable version, with the extras noted, order that version for \$25. (Includes PDF password also-- you get both! I find the PDF much more convenient to use for everything but the spare parts folder items.)

Pricing for **MD2** is as follows:

PDF Version only:

1- 9 single user licenses, \$10 per user; 10+ licenses \$9 each;
Site License, \$125 covers all locations for your organization within a 100 mile radius of your site.
World-Wide License, \$350 covers all locations for your organization on the planet earth.

ClarisWorks and PDF Version:

1- 9 single user licenses, \$25 per user; 10+ licenses \$20 each;
Site License, \$250 covers all locations for your organization within a 100 mile radius of your site.
World-Wide License, \$400 covers all locations for your organization on the planet earth.

Direct Sales: If you prefer, you may use the enclosed order form and send it to the address on it.

Online registration will someday be available at my website:

<http://www.kagi.com/swood/>

You may also phone in your order to Kagi Sales at: 1 (510) 658-5244.

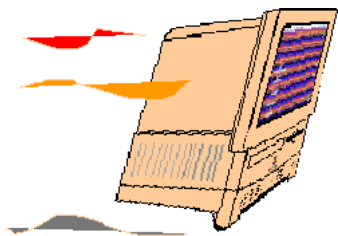
Note: There is an extra \$5 charge if you order this way!

Registration will entitle you to free upgrades (ie., PDF registered users get new PDF versions free, ClarisWorks registered users get ClarisWorks updates and upgrades fee). PDF registered users have the option of paying the difference at a later date to upgrade to ClarisWorks versions.

Some personal observations

These materials were created on my overworked Macintosh Performa 575 (which I love) using ClarisWorks (The actual beginnings of the series were first written in WordPerfect), and converted to Adobe .pdf format with Adobe Acrobat 3.0. The Windows PDF version was created on a Mac with final assembly on an Acer Aspire. My Mac has been

upgraded from a 33 Mhz CPU to a 66 Mhz Power Mac--slow by today's standards, especially after working with the 150 Mhz Acer. I'm currently running System 8.0f5 with 36MB of actual RAM. I print from both the Mac and the Acer to an Epson® Stylus™ Color Ink Jet Printer.



The Math Dittos 2 series was first created out of pure desperation. After years of teaching regular ed, I took my school's LD job. I had no money to purchase appropriate materials, and what my kids needed simply didn't exist on the market anyway. These pages are the result of that.

The series is designed to give fact support and to present just a few practice problems so the ADHD students won't be overwhelmed by the usual page of 25-30 itty-bitty problems with no work space. At times the series may be used with little initial instruction. It really wasn't designed as a programmed material or tutorial. It was designed to give achievable, meaningful practice/seatwork for students after direct instruction had taken place. The old truism of "Teach, Practice, and Apply" holds true here.

Initially designed as a reteach or repair program for students who had an incomplete math experience (read that as "tried and failed"), the series has matured into a tool for both remedial and initial instruction for both special learners (aren't we all) and regular ed students. I have been amazed at the positive academic and attitudinal response of the kids.

Since this is the first release in a new format, there are undoubtedly going to be a few bugs to be worked out. Please let me know if you find errors or have difficulty with the files. Also, I'm always looking for new ideas for this series and other subjects. Let me know what you think, by email or postal.

Questions and comments can be emailed to me at:

swood@kagi.com or
woodsl@thnet.com

My website is at:

<http://www.kagi.com/swood/>

The current update/upgrade page for registered users of the MATH DITTOS 2 series is at:

<http://users.aol.com/swood91617/upgrdpg.html>

All files posted to this site are password protected. Passwords will be supplied to registered users on request by email. The advantage to downloading again after registration is that these files only need a password to decompress, not every time you select a password protected area.

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