



MATH DITTOS 2

Fact Controlled MULTIPLICATION for Special Learners

Version 3.0

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

FACTS		MATH		11		FACTS	
9	2	Name _____		Date _____		9	2
x2	x9	Multiplication Facts 2's & 3's				x2	x9
8	2	233	716	417		8	2
x2	x8	x 6	x 3	x 2		x2	x8
7	2					7	2
x2	x7					x2	x7
6	2	385	322	232		6	2
x2	x6	x 3	x 5	x 9		x2	x6
5	2					5	2
x2	x5					x2	x5
4	2	323	209	538		4	2
x2	x4	x 7	x 3	x 2		x2	x4
3	2					3	2
x2	x3					x2	x3
2	2	906	223	323		2	2
x2	x2	x 2	x 8	x 4		x2	x2
1	2					1	2
x2	x1					x2	x1
0	2					0	2
x2	x0					x2	x0

Learners works best when used with or as a fact acquisition 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

$$\begin{array}{r} 9 \quad 3 \\ \times 3 \quad \times 9 \end{array}$$

$$\begin{array}{r} 8 \quad 3 \\ \times 3 \quad \times 8 \end{array}$$

$$\begin{array}{r} 7 \quad 3 \\ \times 3 \quad \times 7 \end{array}$$

$$\begin{array}{r} 6 \quad 3 \\ \times 3 \quad \times 6 \end{array}$$

$$\begin{array}{r} 5 \quad 3 \\ \times 3 \quad \times 5 \end{array}$$

$$\begin{array}{r} 4 \quad 3 \\ \times 3 \quad \times 4 \end{array}$$

$$\begin{array}{r} 3 \quad 3 \\ \times 3 \quad \times 3 \end{array}$$

$$\begin{array}{r} 2 \quad 3 \\ \times 3 \quad \times 2 \end{array}$$

$$\begin{array}{r} 1 \quad 3 \\ \times 3 \quad \times 1 \end{array}$$

$$\begin{array}{r} 0 \quad 3 \\ \times 3 \quad \times 0 \end{array}$$

MATH DITTOS 2:

Fact Controlled MULTIPLICATION for Special Learners

Organization Chart

	One-digit Multipliers These pages may be used independently of, or with, the two and three-digit multiplier pages.	Two & three-digit Multipliers	Review
1's & 2's			
2's & 3's			
3's & 4's			
4's & 5's			
5's & 6's			
6's & 7's			
7's & 8's			
8's & 9's			

Above: The ClarisWorks Version follows the usual hierarchical menu organization with folders for Blackline Masters, Answer Keys, and Spare Parts.

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.

The PDF version is a collection of Adobe PDF documents. The Documents are linked by bookmarks and also carry thumbnail views. Bookmarks may be used to navigate in and between documents, while thumbnails are only effective for navigation within each document.

The PDF distribution version contains active pages 1-42 in blackline master and answer key format. Pages 43-99 are locked and can be unlocked with the password sent with registration confirmation. A non-locked registered version is also available for download to registered PDF version users.

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?

Blackline Masters

- 99 blackline masters comprise the basic package. See the organizational chart for an idea of the organization. Worksheets move slowly and logically through the steps in multiplication.

Compete Answer Sheets

- 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.

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.

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 are still available. The ClarisWorks for Windows 95 version is still under development. The ClarisWorks versions carry a number of attractive extras.

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 lighter on it.

- 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 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 () and enter your name, email address, mailing address, and the number of licenses you desire for each program you wish to purchase. Save the data from the Register program and send the data and payment to Kagi Shareware at:

Kagi Shareware
1442-A Walnut Street #392-SL
Berkeley, California 94709-1405
USA

If paying with Credit Card or First Virtual, you can email or fax the data to Kagi Shareware. Their email address is sales@kagi.com and their fax number is 1-510-652-6589. You can either copy the data from Register and paste into the body of an email message or you can Save the data as a text document and attach that file to an email message. There is no need to compress the data file, as it's already pretty small. Kagi promptly informs me of your payment and I mail the ClarisWorks version, or the PDF version password.

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 also--you get both!).

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.

If you prefer, you may also mail your order directly to me using enclosed order form to the address below:

Steve Wood
Steven L. Wood Publications
6725 W County Rd 50 N
Sullivan, IN 47882

Online registration is also 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.

Why am I locked out of pages 43-99 in the PDF version?

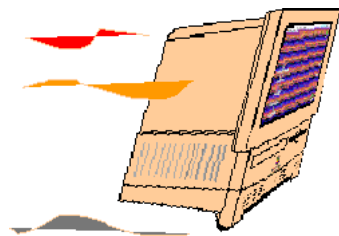
I have published complete, active versions of the MATH DITTOS 2 series at various times. Each time I have done so, registrations have effectively stopped! What a sad comment on all of us! (Yes, I have a few files on my hard drive that I still need to register, but...most of my sharewares are registered.) With some of the older, non-disabled files, I have often spent a good deal of time responding to questions from non-registered users, only to have them not register.

So...I've tried to give you a good look at what MD2:FCMfSpL is. Forty-two pages should be enough to tell if you wish to purchase the entire version.

Unfortunately, once registered in the PDF version, you will need to use the password each time you access the locked files. I don't know another way to do it using Adobe Acrobat. But, as a registered PDF user, you will have the option of downloading the complete PDF version without locks from my private, registered users upgrade site. I know that's a hassle, and I am working on another way. My programming skills simply aren't up to writing a routine to permanently unlock the files.

Some personal observations

These materials were created on my overworked Macintosh Performa 575 (which I love) using ClarisWorks 2.1 and 3.0 (The actual beginnings of the series were first written in WordPerfect). This release was primarily written with ClarisWorks for Macintosh 4.0v5 and converted to Adobe .pdf format with Adobe Acrobat 3.0. The Windows PDF version was created on a Mac version 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 I wanted simply didn't exist on the market anyway. The materials available didn't fit the needs of my students. These pages are the result of that. They were designed to give fact support and to present just a few practice problems so the ADHD students wouldn'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, the MD2 series was designed as a reteach, or repair program for students who had an incomplete math experience (read that as "tried and failed"). I was amazed at the positive academic and attitudinal response of the kids. Over the past 3 years, the series has been adapted and rewritten to be useful for initial instruction also.

This 3.0 release of MD2:FCMfSpL is the book that almost wasn't. Had I know all that was involved and all that would happen during the writing/editing, this would not be here. From the page dates, you can tell that this revision (actually a complete ground-up rewrite) was started over a year before the release date. This has been a year of problems, classroom, computer, physical, and other. I think both my Mac and I had cancer. But we're both well now :-).

My class size went absolutely nuts during the year (sound familiar?), and progress almost ground to a halt on the revision. Claris again distinguished itself by making the revision more difficult than need be by again changing the formatting in their 5.0 release. For this, and other even more serious reasons, the MD2 series is quickly moving away from Claris and ClarisWorks.

WHAT'S NEXT?

I receive regular inquiries about the availability of MD2 products for other operations, especially division. I have the beginnings of a division book on the hard drive, but it is woefully inadequate at this time. If and when I get it right, I'll release it. For now...look very carefully at the answer key of page 54, above...

Other ideas on the drawing board are:

Coupon Math: I've experimented some using store coupons and math word problems. The kids like this approach, but getting coupons that you can legally reproduce takes permission of the coupon granter or a license. I haven't the time or inclination to fight that battle.

Fractions for Special Learners has been under development almost since the beginning of the MD2 series. Unfortunately, I've not found or written a fraction font yet that totally serves the purpose. A special font will be necessary for this project, but must be readily available and free, included with the package, or...?? I've had one less than happy experience using shareware fonts and finding that new versions totally screw up my product. So this tome will have to wait until I have time, and my font drawing skills improve considerably past the level of MSDWT Manuscript (©1996 Steven L. Wood).

My teaching responsibilities seem to be moving more towards younger and more severely disabled children at present. I find that I'm writing a lot of counting and number meaning pages for my kids. These may form up into something in the future.

I continually explore other subject areas in my writing. Unfortunately, I usually end up using someone else's graphics or such to complete language arts projects, so that I can't release the material as freeware. I wrote a really great complement for Creative Wonders Grammar Rock series on parts of speech. I actually wrote Creative Wonders offering to give it away so that others could use it. I never heard a single word in response!

Finally, I'm beginning to explore print alternatives to computer documents. While I firmly believe the MATH DITTOS 2 series is ahead of its time in its approach to computation and packaging, it doesn't pay the bills! Since you're reading the documentation of the distribution version, please remember to pay your shareware fees for the programs you keep! Then pat yourself on the back. Paying shareware fees helps keep materials in the shareware domain, rather than going to print, or shrinkwrapped commercial software.

I had planned for some time to add a ClarisWorks for Windows version of the MD2 series. The problem always was hardware. I needed a PowerMac with a PC card to easily do the conversion. I applied for several grants, but had no luck. The Claris Solutions Alliance was totally unsupportive of these efforts, even though the proposed product only enhanced their products and a simple letter of recommendation might have made the difference. With that kind of a push, I purchased a Pentium last January (My wife actually needed the machine at home for her new job, and truth be known, I actually cut my computer teeth on an IBM.) With Zip drives on both the Mac and Acer, PDF file transfers are easily accomplished. So, the Windows version of the MD2 series is only in Adobe PDF format. Whether I will continue the Macintosh ClarisWorks version is still up in the air. I like the editability of the ClarisWorks versions, and still do much of the composition on a Mac. Maintaining dual versions is a nightmare, however.

Steve Wood
8/10/97

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woodsl@thnet.com

My website is at:

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



MEMBER