

**For students at risk working at
Middle Primary levels**

FUSS FREE MATHS

BOOK 1

NUMBER: WRITTEN CALCULATIONS

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Specific Learning Difficulties (SLDs)

What are Specific Learning Difficulties?

Specific Learning Difficulties **ARE**:

- A range of conditions including dyslexia, dyscalculia, dyspraxia and dysgraphia.
- Significant difficulties in one or a few areas of learning, whilst demonstrating average to above average abilities in most or all other areas.

Specific Learning Difficulties **ARE NOT**:

- A result of global low intelligence, physical conditions such as visual or hearing impairments, or a lack of appropriate parenting or teaching.
- Attention difficulties (or behavioural disorders) such as Attention Deficit Disorder (ADD) and Attention Deficit Hyperactivity Disorder (ADHD). Specific Learning Difficulties are founded on a reduced *capacity to learn*, and attention difficulties stem from a reduced capacity to *concentrate and attend* to tasks when learning.

Specific Learning Difficulties **CAN**:

- Appear to overlap, as learning areas often merge. For example, a person with reading difficulties may struggle in maths in the presence of lengthy word problems or poorly set-out activities (www.dyslexia-speld.com).

Descriptions of the Types of Specific Learning Difficulties

Dyslexia is the most commonly recognised and well-researched SLD, characterised by difficulties in:

- Recognising, reading and spelling words;
- Comprehension of written information;
- Relating new written concepts to stored ideas and existing knowledge;
- *Phonological coding*, the process of associating sounds with letter groups;
- Producing written work (sequencing letters, recognising letter reversals).

(www.dyslexia-speld.com)

Dyscalculia describes significant difficulties in the area of mathematics. People with dyscalculia may possess average to above average linguistic skills but struggle with:

- Mental recall of basic facts;
- Accurate calculation;
- Understanding and applying mathematical concepts, rules and formulas;
- Awareness of time, direction (such as spatial and mapping skills) and sequence;
- The ability to estimate and recognise errors in maths work;
- Money and budgeting;
- Games that involve strategic planning or complex scoring.

(www.dyscalculia.org)

Dysgraphia outlines difficulties with the production of written language which may occur in isolation or in conjunction with other SLDs. Underlying causes include difficulties with sequencing and ordering of letters and words, attention difficulties leading to poor fine motor and organisational skills and reduced auditory processing. (www.idonline.org)

Dyspraxia describes difficulties in the ability to plan and execute new or unfamiliar movements in a coordinated manner. During early childhood, many new tasks are being learned, so this is a time where dyspraxia can significantly impact upon daily living. Problems can appear with performing fine and gross motor tasks (Motor Dyspraxia) and / or speech-related tasks (Verbal or oral Dyspraxia). (www.dyspraxiafoundation.org.uk)

Associated Difficulties

Visual and Visual-Perceptual Difficulties (Source: www.children-special-needs.org)

These difficulties **may** occur in conjunction with, or as a result of, other learning or attention difficulties. The problems listed below can also place a considerable strain on the reading process for a child, and can often go unnoticed until the child is in primary school, where the he / she spends longer periods of time focusing on print.

Myopia (short-sightedness) - may lead to difficulties in reading information written on the blackboard or on charts around the classroom, if not rectified with glasses or contact lenses.

Binocular coordination - the action of both eyes moving together, a process required to read effectively.

Convergence - the movement of both eyes inwards, reaching an accurate point of focus.

Fixation - where the eyes meet on a specific point so that the image is clear.

Pursuit - smoothly tracking across an image or follow a moving object.

Saccades - a "jump" from one point of focus to another without losing place. This is particularly important as skilled reading involves a series of fixations on words across a line rather than one continuous movement.

- Children who have difficulty with any of the above may show signs such as skipping or re-reading lines, misreading small words, using their finger or moving their head as they read.

General Strategies for the Home

Some of the strategies below may be of assistance when supporting your child in their mathematics homework.

- **Short and Sweet** - Shorter, more frequent sessions of homework minimise the risk of your child losing concentration. Practising a task over a number of days will help to reinforce the concept, so try 10 - 15 minutes of homework each day rather than one hour, once a week.
- **A Friendly Place** - Create an environment that is consistent, quiet, comfortable and well lit, with plenty of space for both you and your child to work together. Have a glass of water for your child to drink. Some students also work best if they have small snacks to nibble on whilst they work.
- **The Right Stuff** - Make sure your child has all the necessary equipment before starting. Some handy things to have include highlighters (to emphasise important parts of the homework or examples), eraser (so that mistakes can easily be corrected and there is no mess of scribbling out), sharpener (so that writing is clear and easy to read), lined scrap paper (with relevant sized lines and plenty of space for working out and examples).
- **Write it Big** - A whiteboard may be a useful way of working out problems. It is easy to see, easy to rub out, and another way of introducing a different sensory experience to the child.
- **In Tune** - Background music has been found to be beneficial for some learners. Classical (Baroque) music has been researched quite extensively and may be of assistance.
- **Check it Off** - Using a checklist to tick off tasks that have been done give your child a sense of achievement as well as helping them to keep their place.
- **Charts are not Cheating** - A chart with rules, formulas, definitions and basic maths facts can help your child enormously. Remember that integrating several concepts at once can be overwhelming, and it is best to “isolate” the new skill being learned until your child is confident. For example, if your child is learning how to calculate area, a multiplication chart may be useful until he / she has learned how to use the length x width formula.
- **Success is the Best Foundation** - Remember that every time your child gets something correct, even if it is just one part of a larger task, praising them for their success is the most effective way to increase their self esteem and to motivate them to continue. Vary your positive comments, make them specific: “Good work for writing the 3 in the correct column!” and give them small rewards for reaching their goals: “You finished the whole page! Let’s go and kick the footy!”

Name: _____

Due Date: _____

Digit Value 2

Digit value tells you how much a digit is **worth** in a number, e.g. 1234589.

Look at the table below:



If the number is **WHOLE**, then the **last** digit on the **right** is in the **ONES** column.

	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
Digit	1	2	3	4	5	8	9
Value	1 000 000	200 000	30 000	4 000	500	80	9



WORK FROM RIGHT TO LEFT



● Write the values for these digits:

Number	Thousands	Hundreds	Tens	Ones
3 647	3000	600	40	7
2 364				
9 845				

● Write the value of the **bold** digit.

Number

Value

3**4**7 40

9 29**8**

9 274

3 4**7**6

● Use these to write the number:

Thousands	Hundreds	Tens	Ones	Number
5000	300	40	2	5342
2000	400	70	6	
8000	200	60	6	

Name: _____

Due Date: _____

Decimal Digit Value 2

Decimal digit value is like whole numbers, but now we say **tenths**, **hundredths** and **thousandths**.

See how the number 4.367 is written in the table.

	Ones	.	Tenths	Hundredths	Thousandths
Digit	4	.	3	6	7
Value	4	.	0.3	0.06	0.007

● Write the values for these numbers:

Number	Ones	Tenths	Hundredths	Thousandths
5.869	5	0.8	0.06	0.009
4.682				
7.927				

● Write the value of the **bold digit**:

<u>Number</u>	<u>Value</u>
2.7 9 3	0.09
6. 5 20	_____
9 .927	_____
7.0 9 2	_____

● What is the value in dollars or cents?

<u>Amount</u>	<u>Value</u>
\$5.9 5	\$0.05
\$27.60	_____
\$199.02	_____
\$3.0 5	_____
\$0.90	_____

● Use these to write the number:

Ones	Tenths	Hundredths	Thousandths	Number
4	0.900	0.050	0.007	4.957
6	0.7	0.03	0.009	
7	0.3	0.00	0.002	

Name: _____

Due Date: _____

Addition 2

To add,

$$\begin{array}{r} 564 \\ + 432 \\ \hline \end{array}$$

Add the **Ones**,then the **Tens**,then the **Hundreds**.

H	T	O
5	6	4
4	3	2
+		6

H	T	O
5	6	4
4	3	2
+	9	6

H	T	O
5	6	4
4	3	2
+	9	9

● Try these:

$$\begin{array}{r} 35 \\ + 24 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 21 \\ + 70 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 537 \\ + 422 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 243 \\ + 515 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 842 \\ + 131 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 346 \\ + 143 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 582 \\ + 411 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 235 \\ + 624 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 832 \\ + 121 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 373 \\ + 522 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 864 \\ + 121 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 253 \\ + 735 \\ \hline \\ \hline \end{array}$$

Try these on some spare lined paper.

$626 + 373$

$847 + 142$

$448 + 321$

$793 + 102$

$4263 + 5132$

$6351 + 3220$

$1262 + 7127$

$4462 + 3231$