

Grade 5
Textbook
(CAPS edition)
Revised for 2023

CONTENTS:

Page

A1.	Number systems	2
A2.	Place Value	6
A3.	Basic Operations	15
	Addition	15
	Subtraction	18
	Multiplication	21
	Division	29
A4.	Time	36
B1.	Fractions	44
B2.	Decimal Fractions	58
B3.	Money	63
B4.	Shapes: 2D	68
	Tessalation	71
	Symmetry	71
	Enlargements/Reductions	71
	Transformation	71
	Shapes: 3D	73
B5.	Measurement	76
B6.	Ratio and Rates	92
B7.	Data	95
B8.	Area and Perimeter	99
B9.	Temperature (Positive and Negative numbers)	104
B10.	Probability	109
	Speedtests	110
	Recources	144

This book was compiled and processed by E. Language in 2013 in collaboration with E.J. Du Toit.

E-mail: info@abcbooks.co.za

Copyright © 2012. All copyrights reserved. No part of this publication may be reproduced in any form; unless written consent was obtained.

ISBN 978-1-928336-34-1

**Visit [www. abcmathsandscience.co.za](http://www.abcmathsandscience.co.za) for free
downloadable worksheets and much more!**

Chapter A1

Number systems

A1.1 Counting numbers, even and uneven numbers:

COUNTING NUMBERS

0 ; 1 ; 2 ; 3 ; 4 ; 5 ; 6 ; 7 ; 8 ; 9 ; _ _ _

Even numbers: 2 ; 4 ; 6 ; 8 ; 10 ; ...

Divisible by 2 without a remainder

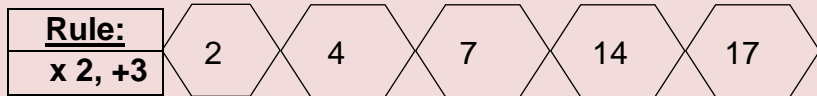
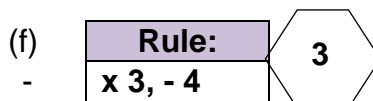
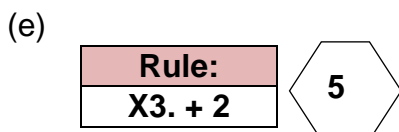
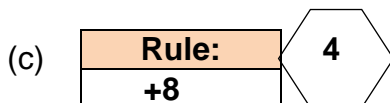
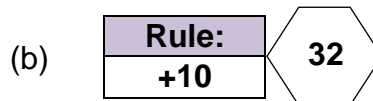
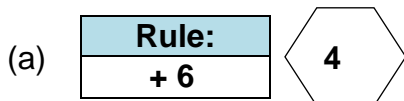
Uneven numbers: 1 ; 3 ; 5 ; 7 ; 9 ; 11 ; ...

Can not be divided evenly into groups of two.

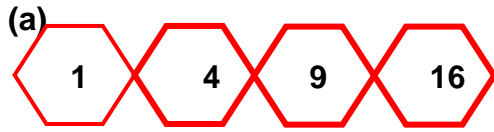
Exercise 1:

(1) Complete the number patterns:

- (a) Whole numbers smaller than 10:
- (b) Natural numbers between 20 and 30:
- (c) The 10 even numbers between 40 and 60:
- (d) Uneven numbers *from* 15 to 35:
- (e) Even numbers smaller than 90 but greater than 66:
- (f) The 14 even numbers *between* 20 and 50:
- (g) The even numbers smaller than 150 and greater than 130:
- (h) The first 12 uneven natural numbers:
- (i) Start with 42 and count in two's up to 60:
- (j) Start with 145 and count in fives up to 180:
- (k) Start with 168 count in three's up to 192:
- (l) Start with 120 and account in fours up to 160:
- (m) Start with 260 and count in sixes up to 320:

Exercise 2:**(1) Write the next 5 numbers in each pattern.****(a) 4 ; 6 ; 8 ; 10 ; 2 ;****(b) 8 ; 11 ; 14 ; 17 ; 5 ;****(c) 7 ; 12 ; 17 ; 2 ;****(d) 6 ; 8 ; 11 ; 15 ; 5 ;****(e) 101 111 ; 121 ;****Each pattern has a rule:****EXAMPLE A:****EXAMPLE B:****(2) Use the given rules to complete the patterns. Start with the given number.**

(3) Write down the rule for each pattern in words.



Exercise 3:

Use the number chart to answer the questions below

101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200

(1) Write the numbers as requested as well as the rule in words.

- | | |
|---------------------------------------|-------------------------------------|
| (a) The numbers in the fourth column: | (b) The numbers in the seventh row: |
| (c) Add 10 to 121 and subtract 5: | (d) 10 more than 134 is: |
| (e) Subtract 20 from 171 and add 2: | (f) 40 more than 120 is |
| (g) 122 minus 7 and then add 7: | (h) $160 + 10 - 5$ is: |
| (i) $156 + 4 - 8 + 2$ is: | (j) $177 + 20 - 2$ is: |
| (k) $167 - 7 + 30$ is: | (l) $189 - 6 - 4 - 10$ is: |
| (m) $134 + 20 - 30$ is: | (n) $179 - 20 - 10 - 5$ is: |
| (o) $145 + 40 - 13$ is: | (p) $188 - 25 + 14$ is: |
| (q) $224 - 4 + 12$ is: | (r) $876 + 3 - 4$ is: |

Did you see?

The rule for the columns is + 10 and the rule for the rows is +1

(1) Make up the tens and write down the answers.

(1) $11 + 29 - 3 =$

(3) $11 + 19 - 1 =$

(5) $45 - 5 + 12 =$

(7) $14 - 4 + 30 =$

(9) $120 - 30 + 15 =$

(11) $156 - 6 + 30 =$

(13) $657 - \underline{\hspace{2cm}} - 7 = \underline{600}$

*(o) $150 - 50 + \underline{\hspace{2cm}} = \underline{130}$

*(q) $345 - 5 + \underline{\hspace{2cm}} = \underline{400}$

(2) $18 + 2 + 19 =$

(4) $5 + 45 - 2 =$

(6) $7 + 13 - 6 =$

(8) $78 - 8 - 10 =$

(10) $110 + 34 - 10 =$

(12) $254 - 54 + 6 =$

(14) $784 - \underline{\hspace{2cm}} = \underline{700}$

*(p) $300 + 5 - \underline{\hspace{2cm}} = \underline{299}$

*(r) $467 + 13 + \underline{\hspace{2cm}} = \underline{500}$

(2) Write the missing numbers, as well as the rule.

(a)

136		140	142	144
-----	--	-----	-----	-----

(b)

		20	15	
--	--	----	----	--

(c)

	106	113	120	
--	-----	-----	-----	--

(d)

124		144	154	
-----	--	-----	-----	--

(e)

666	555			
-----	-----	--	--	--

(f)

	24	36		
--	----	----	--	--

(g)

15			60	75
----	--	--	----	----

Chapter A2

Place Value

A.2.1 Place value and number value:

This table shows the first 6 places left of the comma.

HTh	TTh	Th	H	T	O
					1
				1	0
			1	0	0
		1	0	0	0
	1	0	0	0	0
1	0	0	0	0	0
THOUSANDS COLUMN			HUNDREDS COLUMN		

Remember:

Leave a gap between the hundreds and the thousands.

E.g. One hundred and thirty-eight thousand four hundred and eleven
= 138 411

Exercise 1:

(1) Read the numbers out loud and write them in words.

(a) 3 548	(b) 12 576	(c) 20 570	(d) 56 413	(e) 120 005
-------------	--------------	--------------	--------------	---------------

(2) Write the following numbers:

- Three thousand one hundred and seventy-eight
- Twenty-seven thousand nine hundred and fourteen
- Eighty-nine thousand eight hundred and forty-one
- Ten thousand seven hundred and forty
- Thirty-three thousand eight hundred and ninety-nine
- One hundred and forty-two thousand and six
- Fourteen thousand one hundred and two
- Three hundred and eighteen thousand six hundred and twelve
- Four hundred and thirty-six thousand

(3) Write down the numbers below.

(a) Each 'X' represents 1 unit.

(i)					(ii)					(iii)					
TTh	Th	H	T	O	TTh	Th	H	T	O	HTh	TTh	Th	H	T	O
X						X							X		
X		X				X							X		X
X	X	X			X	X						X	X	X	X
X	X	X		X	X	X	X	X		X		X	X	X	X
X	X	X		X	X	X	X	X		X		X	X	X	X

(a) Each 'X' represents 2 units.

(i)					(ii)					(iii)					
TTh	Th	H	T	O	TTh	Th	H	T	O	HTh	TTh	Th	H	T	O
X		X				X							X		
X		X	X			X						X	X	X	X
X	X	X	X		X	X	X	X		X		X	X	X	X
X	X	X	X	X	X	X	X	X		X		X	X	X	X

Exercise 2:

(1) Write in expanded notation.

Example: $34\ 189 = 30\ 000 + 4\ 000 + 100 + 80 + 9$

(a) 7 921

(b) 7 021

(c) 100 892

(d) 100 001

(e) 909 009

(f) 2 000 111

REMEMBER:

$1T = 1 \times 10$	$1H = 1 \times 100$	$1Th = 1 \times 1\ 000$	$1TTh = 1 \times 10\ 000$	$1HTh = 1 \times 100\ 000$
--------------------	---------------------	-------------------------	---------------------------	----------------------------

(2) Fill in the missing numbers.

(a) $3\ 478 = (3 \times 1\ 000) + (4 \times 100) + (7 \times \underline{\hspace{2cm}}) + (8 \times \underline{\hspace{2cm}})$

(b) $6\ 510 = (6 \times \underline{\hspace{2cm}}) + (5 \times \underline{\hspace{2cm}}) + (1 \times 10)$

(c) $12\ 600 = (1 \times \underline{\hspace{2cm}}) + (2 \times \underline{\hspace{2cm}}) + (6 \times \underline{\hspace{2cm}})$

(d) $11\ 780 = (1 \times \underline{\hspace{2cm}}) + (1 \times \underline{\hspace{2cm}}) + (78 \times 10)$

(e) $5\ 104 = (5 \times \underline{\hspace{2cm}}) + (1 \times \underline{\hspace{2cm}}) + (4 \times \underline{\hspace{2cm}})$

(3) Complete the following;

- (a) $23\ 478 = (23 \times 1\ 000) + (47 \times 10) + (8 \times 1)$
- (b) $30\ 560 = (3 \times 10\ 000) + (56 \times \underline{\hspace{2cm}})$
- (c) $45\ 678 = (45 \times \underline{\hspace{2cm}}) + (6 \times \underline{\hspace{2cm}}) + (78 \times 1)$
- (d) $311\ 780 = (311 \times \underline{\hspace{2cm}}) + (78 \times \underline{\hspace{2cm}})$
- (e) $12\ 346 = (12 \times \underline{\hspace{2cm}}) + (34 \times \underline{\hspace{2cm}}) + (6 \times 1)$
- (f) $23\ 400 = (2 \times \underline{\hspace{2cm}}) + (34 \times \underline{\hspace{2cm}})$
- (g) $45\ 721 = (45 \times \underline{\hspace{2cm}}) + (72 \times \underline{\hspace{2cm}}) + (1 \times 1)$
- (h) $14\ 500 = (145 \times \underline{\hspace{2cm}})$
- (i) $76\ 940 = (7\ 694 \times \underline{\hspace{2cm}})$
- (j) $67\ 352 = (673 \times \underline{\hspace{2cm}}) + (52 \times \underline{\hspace{2cm}})$

Exercise 3:**(1) More place value exercises.****(a) Write down the following numbers:**

- | | |
|---------------------------|--------------------------|
| (i) 14 ones | (ii) 34 tens |
| (iii) 20 tens | (iv) 51 hundred |
| (v) 80 hundred | (vi) 43 thousand |
| (vii) 21 ten thousand | (viii) 10 thousand |
| (ix) 5 h hundred thousand | (x) 65 thousand |
| (xi) 120 hundred | (xii) 30 ten thousand |
| (xiii) 140 ones | (xiv) 1 hundred thousand |
| (xv) 23 hundred | (xvi) 2 x 45 tens |
| (xvii) 4 x 25 tens | (xviii) 10 times 10 ten |

(b) Write down the correct numbers.

- | | |
|-------------------|------------------------|
| (i) 10 T | (ii) 14 Th |
| (iii) 10 TTh | (iv) 80 Th |
| (v) 2 H + 6T | (vi) 13 T + 24Th + 2 O |
| (vii) 2 TTh + 3 H | (viii) 41 T |

(ix) $12 \text{ Th} =$

(xi) $162 \text{ H} =$

(xiii) $23 \text{ H} + 34 \text{ Th} =$

(xv) $12 \text{ Th} + 120 \text{ H} =$

(x) $12 \text{ TTh} =$

(xii) $7 \text{ H} + 3 \text{ T} + 24 \text{ O} =$

(xiv) $12 \text{ T} + 32 \text{ H} =$

(xvi) $34 \text{ Th} + 45 \text{ T} + 2 \text{ H} =$

(2) Copy the table in your book. Write down the place value and number value of the underlined digits.

	NUMBER	PLACE VALUE	NUMBER VALUE
(a)	<u>2</u> 4 678	2 Th	20 000
(b)	47 <u>12</u> 1	12 T	120
(c)	<u>1</u> 567		
(d)	<u>7</u> 5 682		
(e)	<u>4</u> 879		
(f)	<u>9</u> 7 614		
(g)	<u>14</u> 870		
(h)	<u>40</u> 765		
(i)	<u>185</u> 982		
(j)	34 <u>58</u> 0		

(3) Write down the following numbers.

(a) $2 \text{ TTh} + 1 \text{ Th} + 3 \text{ H} + 3 \text{ T} + 6 \text{ O}$

(c) $2 \text{ Th} + 23 \text{ O}$

(e) $23 \text{ H} + 2 \text{ TTh} + 5 \text{ O}$

(g) $2 \text{ TTh} + 6 \text{ HTh} + 3 \text{ H} + 7 \text{ Th}$

(b) $2 \text{ Th} + 23 \text{ O}$

(d) $12 \text{ O} + 24 \text{ H}$

(f) $2 \text{ TTh} + 6 \text{ HTh} + 3 \text{ H} + 7 \text{ Th}$

(h) $243 \text{ O} + 2 \text{ Th}$

(4) More of a challenge.

EXAMPLE: $13 \text{ Th} + 4 \text{ TTh} + 56 \text{ H} + 14 \text{ T} = 13\,000 + 40\,000 + 5\,600 + 140$
 $= 58\,740$

(a) $23 \text{ H} + 16 \text{ T} + 7 \text{ O}$

(c) $12 \text{ T} + 14 \text{ O} + 16 \text{ H}$

(b) $23 \text{ T} + 16 \text{ O} + 7 \text{ H}$

(d) $36 \text{ H} + 712 \text{ O} + 9 \text{ T}$

Exercise 4:**(1) Write down the correct answer.**

- | | |
|----------------------|-----------------------|
| (a) 9 x 1T | (b) 12 x 10 |
| (c) 14 x 1H | (d) 45 x 10 |
| (e) 7 x 1Th | (f) 144 x 10 |
| (g) 618 x 100 | (h) 30 x 1 000 |
| (i) 41 x 1TTh | (j) 23 x 100 |
| (k) 9 x 10 000 | (l) 20 x 10 X 10 |
| (m) 40 x 10 | (n) 30 x 1T X 1T |
| (o) 70 x 100 | (p) 23 x 10 x 10 x 10 |
| (q) 30 x 2 x 10 x 10 | (r) 20 x 2 x 10 |
| (s) 40 x 2 x 100 | (t) 30 x 1Th |

There are other possibilities as well.

EXAMPLE:

60	<i>kan ook geskryf word as</i>	6 x 10	<i>or</i>	6 x 1 x 10
6 000		6 x 10 x 10 x 10		6 x 100 x 10
60 000		6 x 10 x 10 x 10 x 10		600 x 100
THEREFORE: 34 500 = 345 H OR 3450 T				

(2) Write each of the following numbers in 2 different ways.

(a) 400

(b) 2 000

(c) 40 000

(d) 2 300

(e) 500 000

(3) Fil in < , > or = :(a) 6 O 6(b) 567 5 H + 67 O(c) 160 T 16 H(d) 3 T 3 H(e) 13TTh 130 Th(f) 2 x 10 T 200(g) *10 00 10 x 10(h) 30 110 30 011(i) 8 x 4 T 4 H

- | | | |
|---|--|---|
| (j) 50 <input type="text"/> 5×10
(m) 24 Th <input type="text"/> 140 T
(p) 13 H <input type="text"/> 1 300
(s) 12 TTh <input type="text"/> $10\ 000 + 200$
(v) 7 000 <input type="text"/> 70×10
(y) 16 T <input type="text"/> 1 600
(bb) 3 567 <input type="text"/> 34 765 | (k) 21 500 <input type="text"/> 21 Th + 5 T
(j) 100 H <input type="text"/> 10 000
(q) 12 H + 77 <input type="text"/> 12 770
(t) 7 HTh <input type="text"/> 70 000
(w) 5 TTh <input type="text"/> 50 000
(z) 23 H <input type="text"/> 23×100
(cc) 43×100 <input type="text"/> 34 TTh | (l) $2 \times 3H$ <input type="text"/> 3 000
(o) 16 H <input type="text"/> 160
(r) $3H + 20T$ <input type="text"/> 230
(u) $14T + 4H$ <input type="text"/> 540
(x) $4H + 1Th$ <input type="text"/> 440
(aa) $5 \times 20T$ <input type="text"/> 1 000
(dd) $50T \times 2$ <input type="text"/> 1000 |
|---|--|---|

(4) Complete the following:**(a) Add '1' to each of the following numbers.**

- | | |
|---|---|
| (i) $9 + 1$
(iii) $999 + 1$
(v) $99\ 999 + 1$ | (ii) $99 + 1$
(iv) $9\ 999 + 1$
(vi) $999\ 999 + 1$ |
|---|---|

(b) Add '10' to each of the following numbers.

- | | |
|--|--------------------------------------|
| (i) $9 + 10$
(iii) $999 + 10$
(v) $99\ 999 + 10$ | (ii) $99 + 10$
(iv) $9\ 999 + 10$ |
|--|--------------------------------------|

(c) Add '100' to each of the following numbers.

- | | |
|---|--|
| (i) $9 + 100$
(iii) $999 + 100$
(v) $99\ 999 + 100$ | (ii) $99 + 100$
(iv) $9\ 999 + 100$ |
|---|--|

Futher extension of the number system.

Million	Hundred Thousand	Ten Thousand	Thousand	Hundred	Tens	Ones
3	4	5	0	6	1	2

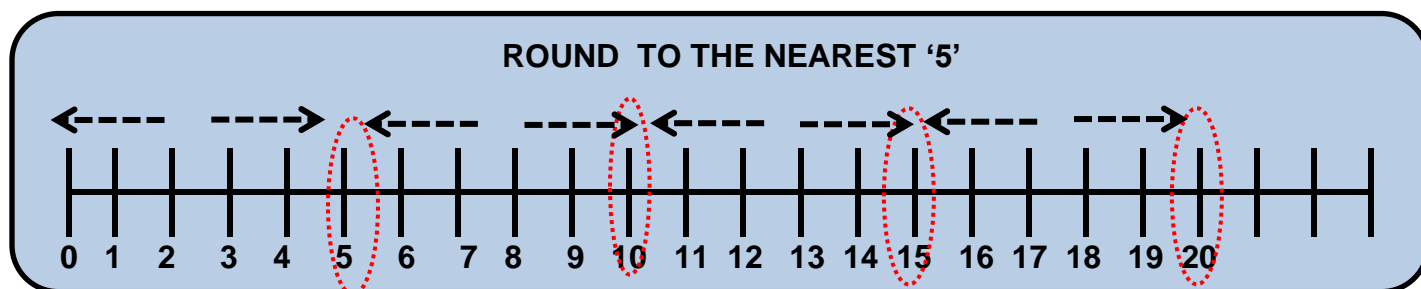
The above number is:

Three million four hundred and fifty thousand six hundred and twelve

$$1\ 000\ 000 = 10 \times 10 \times 10 \times 10 \times 10 \times 10$$

This is the way to write one million.

A.2.2 ROUNDING:



Exercise 5:

(1) Write down the next 10 multiples of '5'.

(a) 405

(b) 455

(c) 505

(d) 555

(2) Use the multiples of 5 and decide which multiple is the nearest to the following numbers. Round the following to the nearest '5'.

(a) 41 \approx

(b) 89 \approx

(c) 122 \approx

(d) 718 \approx

(e) 1 456 \approx

(f) 1 271 \approx

(g) 5 677 \approx

(h) 12 312 \approx

(i) 9 421 \approx

(j) 5 467 \approx

If the last digit is a 1 ; 2 ; 8 or 9 the last digit is a '0'.

If the last digit is a 3 ; 4 ; 6 or 7 the last number is a '5'

(3) Round the numbers to the nearest 5 and give an estimated answer.

EXAMPLE: $127 + 212 + 342 \approx 125 + 210 + 340 \approx \mathbf{675}$

(a) $122 + 51 \approx$

(b) $337 + 189 \approx$

(c) $2\,122 + 123 \approx$

(d) $21\,222 + 452 \approx$

(e) $12\,567 + 68 \approx$

(f) $2\,347 + 182 \approx$

EXAMPLE : Round the number to the nearest 100:

HTh	TTh	Th	H	T	O
		8	8	5	6

Therefore 8 856, rounded off to the nearest hundred can be written as: $8\,856 \approx 8\,900$

Exercise 6:
Round to the nearest '10', '100' of '1 000'

(1) Round the numbers to the nearest digit as indicated in brackets.

(a) $567 (10) \approx$

(b) $7\ 893 (10) \approx$

(c) $2\ 389 (100) \approx$

(d) $9\ 654 (100) \approx$

(e) $1\ 233 (1\ 000) \approx$

(f) $55\ 178 (1\ 000) \approx$

(g) $4\ 589 (10) \approx$

(h) $3\ 472 (1\ 000) \approx$

(2) Copy the table in your book. Round the numbers as indicated.

	NUMBER	Nearest 10	Nearest 100	Nearest 1 000
(a)	2 356			
(b)	12 438			
(c)	30 454			
(d)	29 451			
(e)	4 444			
(f)	6 736			
(g)	12 579			
(h)	122 318			
(i)	746 102			
(j)	436 383			

(3) Give an estimated answer by rounding the numbers.

EXAMPLE:

$$27 + 12 + 43 \approx 30 + 10 + 40$$

$$\approx \underline{80}$$

(a) $31 + 22 + 18 \approx$ _____

(b) $49 + 51 \approx$ _____

(c) $77 + 32 + 21 \approx$ _____

(d) $199 - 41 \approx$ _____

(e) $42 + 57 - 12 \approx$ _____

(f) $67 + 96 \approx$ _____

(g) $37 + 21 - 11 \approx$ _____

(h) $47 + 33 \approx$ _____

(i) $57 - 18 \approx$ _____

(j) $76 + 52 \approx$ _____

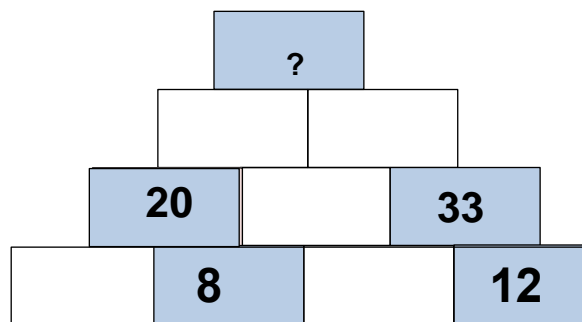
REVISION EXERCISE:**(1) Write down the following numbers: (2)**

(a) All the even numbers in the table.

4	9	12	45	678	23 670	132 562	3 400	1 000	4 015
---	---	----	----	-----	--------	---------	-------	-------	-------

(b) All the uneven numbers in the table.

5	4	1	57	3	4 567	12 341	2 000	30 005	23 458	32
---	---	---	----	---	-------	--------	-------	--------	--------	----

(2) Complete the following. Which number should be in the place of the '?' ($\frac{1}{2}$ each) **(3)**

? = _____

(3) Study the number. Write *true* or *false* next to each sentence.

465 780

(6)

- (a) The number can also be written as: 4 HTh + 65 Th + 78 T
 (b) There are 465 Th + 78 O
 (c) The number is even
 (d) There are 46 578 T
 (e) The number can also be written as $(46 \times 1000) + (78 \times 10) + 5\,000$
 (f) 465 780 is 20 less than 465 800

(4) Round the numbers as indicated. (4)

(a) $237(5) \approx$

(b) $373\,856(1\,000) \approx$

(c) $23\,132(100) \approx$

(d) $9\,999(100) \approx$

(5) Write down the correct answer. (10)

(a) $1\,340 + 10$

(b) $9\,990 + 10$

(c) $10 \times 1\,H$

(d) $9\,999 + 1$

(e) 24×100

(g) $12 \times 10 \times 10$

(i) $13 \times 10 \text{ T}$

(f) $7\,465 \times 10$

(h) $30 \times 10 \times 10 \times 10$

(j) $140 + (1 \times 100) =$

(6) Fill in: <, > of =.**(10)**

(a) $40\,000 + 5\,000 + 700 + 40 + 1$ $45\,471$

(b) $20\,000 + 400 + 16$ $26\,416$

(c) $12 \text{ TTh} + 3 \text{ H} + 60$ $12\,360$

(d) $23 \text{ TTh} + 6 \text{ Th} + 34 \text{ H} + 6 \text{ T}$ $29\,346$

(e) 234×100 $234\,000$

(f) $600\,000$ $60 \times 60 \times 60$

(g) 140 H $14\,000$

(h) $(23 \times 1\,000)$ $2\,300$

(i) 16 T 160 O

(j) $12 \text{ Th} + 240 \text{ H}$ $36\,000$

POSSIBLE TOTAL: 35**Chapter A3****Basic Operations****A3.1 Additon:**

METHOD 1	
USE EXPANDED NOTATION TO ADD NUMBERS.	
1 789 + 3 567 =	
$1\,789 = 1\,000 + 700 + 80 + 9$	
$3\,567 = 3\,000 + 500 + 60 + 7$	
$- \quad 4\,000 + 1\,200 + 140 + 16$	$= 5\,000 + 300 + 50 + 6$
	$= \underline{5\,356}$

Exercise 1:**(1) Use method 1 or any other method to do the following sums.**

(a) $3\,465 + 2\,123$		(b) $3\,698 + 1\,756$		(c) $23\,467 + 67\,984$
------------------------------	--	------------------------------	--	--------------------------------

(2) Do the following.

(a) $3\ 456 + 1\ 567 =$	(b) $4\ 677 + 2\ 459 =$	(c) $3\ 567 + 6\ 987 =$
(d) $12\ 670 + 44\ 067 =$	(e) $51\ 032 + 7\ 298 =$	(f) $38\ 679 + 18\ 872 =$

METHOD 2 USE THE 'ADD-ON' METHOD
$3\ 435 + 1\ 460 =$ $3\ 435 + 1000 \rightarrow 4\ 435 + 400 \rightarrow 4\ 835 + (10 + 50) \rightarrow 4\ 895$ <div style="text-align: center; margin-left: 100px;"> \downarrow (60) </div> <p><i>Numbers can also be expanded</i> \rightarrow</p>

Exercise 2:

(1) Do the following sums. Use the add on method or any other method.

(a) $3\ 463 + 4\ 215$	(b) $13\ 126 + 1\ 173$	(c) $25\ 173 + 2\ 418$
(d) $33\ 456 + 1\ 268$	(e) $334\ 678 + 124$	

(2) Write down the sums and complete the sums by adding the numbers as indicated.

(a) $3\ 456 + 4\ 133 =$

$$3\ 456 + 4\ 000 \rightarrow \boxed{} + 100 \rightarrow \boxed{} + 30 \rightarrow \boxed{} + 3$$

$$\rightarrow \boxed{}$$

2(b) $21\ 145 + 5\ 555 =$

$$21\ 145 + 5\ 000 \rightarrow \boxed{} + 500 \rightarrow \boxed{} + 50 \rightarrow \boxed{} + 5$$

$$\rightarrow \boxed{}$$

2(c) $67\ 370 + 2\ 135 =$

$$67\ 370 + 2\ 000 \rightarrow \boxed{} + 100 \rightarrow \boxed{} + 30 \rightarrow \boxed{} + 5$$

$$\rightarrow \boxed{}$$

2(d) $32\ 621 + 20\ 421 =$

$$32\ 621 + 20\ 000 \rightarrow \boxed{} + 400 \rightarrow \boxed{} + 20 \rightarrow \boxed{} + 1$$

$$\rightarrow \boxed{}$$

2(e) $16\,723 + 14\,104 =$

$$16\,723 + 14\,000 \rightarrow \boxed{} + 100 \rightarrow \boxed{} + 4 \rightarrow \boxed{}$$

2(f) $22\,287 + 12\,921 =$

$$22\,287 + 10\,000 \rightarrow \boxed{} + 2\,000 \rightarrow \boxed{} + 900 \rightarrow \boxed{} + 20$$

$$\rightarrow \boxed{} + 1 \rightarrow \boxed{}$$

METHOD 3- VERTICAL METHOD

(A) $33\,539 + 12\,567 =$

$$\begin{array}{r} 33\,539 \\ \underline{12\,567} \\ + 46\,106 \end{array}$$

(B) $33\,539 + 12\,567 =$

$$\begin{array}{r} 33\,539 \\ \underline{12\,567} \\ 16\,(9+7) \\ 90\,(30+60) \\ 1\,000\,(500+500) \\ 5\,000\,(3\,000+2\,000) \\ \underline{40\,000}\,(30\,000+10\,000) \\ 46\,106 \end{array}$$

Exercise 3:**(1) Use method(A) or (B) to do the following.**

(a) $2\,356 + 578 =$

(b) $5\,782 + 5\,347 =$

(c) $32\,784 + 5\,577 =$

(b) $15\,670 + 3\,309 =$

(e) $45\,473 + 6\,782 =$

(f) $95\,120 + 35\,507 =$

g) $62\,666 + 3\,218 =$

(h) $55\,371 + 12\,341 =$

(2) Do the following.

(a) $5\,673 + 6\,312 =$

(b) $2\,689 + 6\,783 =$

(c) $12\,547 + 14\,542 =$

(d) $34\,578 + 12\,542 =$

(e) $16\,329 + 12\,457 =$

(f) $42\,555 + 3\,555 =$

A3.2 Subtraction:

METHOD 1 – REPEATED SUBTRACTION
$4\ 562 - 3\ 219 =$ $4\ 562 - 3\ 000 \rightarrow 1\ 562 - 200 \rightarrow 1\ 362 - 10 \rightarrow 1\ 352 - 9 \rightarrow 1\ 343$

Exercise 4:

Use repeated subtraction to do the sums.

(a) $7\ 548 - 3\ 216$	(b) $7\ 654 - 2\ 652$	(c) $51\ 572 - 272$
(d) $9\ 452 - 745$	(e) $154\ 786 - 42\ 341$	

(2) Complete the sums as indicated.

(a) $4\ 567 - 1\ 324 =$

$$4\ 567 - 1\ 000 \rightarrow \boxed{} - 300 \rightarrow \boxed{} - 20 \rightarrow \boxed{} - 4 \rightarrow \boxed{}$$

(b) $7\ 672 - 2\ 518 =$

$$7\ 672 - 2\ 000 \rightarrow \boxed{} - 500 \rightarrow \boxed{} - 10 \rightarrow \boxed{} - 8 \rightarrow \boxed{}$$

(c) $12\ 341 - 5\ 348 =$

$$12\ 341 - 5\ 000 \rightarrow \boxed{} - 300 \rightarrow \boxed{} - 40 \rightarrow \boxed{} - 8 \rightarrow \boxed{}$$

(d) $36\ 350 - 30\ 125 =$

$$36\ 350 - 30\ 000 \rightarrow \boxed{} - 100 \rightarrow \boxed{} - 25 \rightarrow \boxed{}$$

(e) $90\ 775 - 45\ 650 =$

$$90\ 775 - 45\ 000 \rightarrow \boxed{} - 600 \rightarrow \boxed{} - 50 \rightarrow \boxed{}$$

METHOD 2 – EXPANDED NOTATION..

$7789 - 3567 =$

$$\begin{array}{r}
 7789 = 7000 + 700 + 80 + 9 \\
 - 3567 = \underline{3000 + 500 + 60 + 7} \\
 4000 + 200 + 20 + 2 = 4222
 \end{array}$$

Exercise 5:**(1) Use the expanded notation method or any other method to find the answers**

(a) $7569 - 2421$	(b) $9457 - 4237$
(c) $34563 - 4321$	(d) $56782 - 3466$

(2) Do the following by using any method.

(a) $5678 - 3236 =$	(b) $7672 - 2672 =$
(c) $45678 - 6689 =$	(d) $13900 - 12463$

METHOD 3 - VERTICAL METHODS

(A) $43573 - 18348 =$

$$\begin{array}{r}
 43573 \\
 - 18348 \\
 \hline
 25225
 \end{array}$$

(B) $43573 - 18348 =$

$$\begin{array}{r}
 43573 \\
 - 18348 \\
 \hline
 5(13-8) \\
 20(60-40) \\
 200(500-300) \\
 5000(13000-8000) \\
 \hline
 20000(30000-10000) \\
 \hline
 25225
 \end{array}$$

Exercise 6:**(1) Use method (3) to do the sums.**

(a) $6784 - 3567 =$

(c) $62791 - 61792 =$

(e) $57400 - 4855 =$

(g) $96700 - 699 =$

(b) $45689 - 29599 =$

(b) $68932 - 25769 =$

(f) $73532 - 3691 =$

(h) $600000 - 45783 =$

(2) Find the correct answers.

(a) $56\,432 - 26\,481$	(b) $45\,622 - 7\,000$	(c) $88\,000 - 888$
(d) $45\,365 - 13\,281$	(e) $24\,198 - 3\,577$	(f) $18\,524 - 12\,873$

A3.3 Addition and subtraction as inverse operations:

To check your answer of an addition question you should subtract the numbers and the other way round.

EXAMPLE:

<u>ADDITION</u>	<u>SUBTRACTION</u>
$\begin{array}{r} 23\,467 \\ + 56\,789 \\ \hline 80\,256 \end{array}$	$\begin{array}{r} 80\,256 \\ - 56\,789 \\ \hline 23\,467 \end{array}$

Exercise 7:

(1) Test the following answers by using the inverse operation.

(a) $345 + 267 = 512$	(b) $45\,678 - 24\,754 = 20\,924$
(c) $45\,678 - 24\,754 = 20\,924$	(d) $167\,547 - 34\,225 = 133\,292$
(e) $42\,875 + 12\,569 - 4\,789 = 50\,655$	

Exercise 8:

Do the following.

(1) There are 4 567 apples, 680 bananas and 1 344 oranges in a shop. How many fruit are there in total?

(2) 45 789 spectators are expected at a rugby game. 9 562 tickets have already been sold. How many tickets are still available?

(3) Calculate the **sum** of 56 782 and 9 356.

(4) Calculate the **difference** between 49 900 and 45 271.

(5) What must be added to 67 800 in order to get to an answer of 99 000?
