

Grade 4 – Textbook

(CAPS Edition)

Revised for 2023

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To the learners: Always use rough paper to do more difficult calculations

This book was compiled and processed by E. Language in 2013 in collaboration with E.J. Du Toit. Revised 2018.

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Chapter A1

Number Systems

Natural numbers, even numbers and uneven numbers:

WHOLE 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 ; ... If you divide by 2, there will be a remainder

Exercise 1:

(1) Complete the number patterns: ○ ○ ○

- (a) Numbers less than 10
- (b) Numbers **between** 45 and 55
- (c) The even numbers between 120 and 140
- (d) Uneven numbers from 3 to 23
- (e) Even numbers smaller than 40 but greater than 16
- (f) The even numbers between 340 and 360
- (g) The even numbers between 70 and 90
- (h) The first 12 uneven numbers
- (i) Start at 24 and count in two's up to 42:
- (j) Start at 25 and count in fives up to 60
- (k) Start at 9 and count in three's up to y 33
- (l) Start at 20 and count in four's tot up to 60
- (m) Start at 6 and count in sixes up to 72:

Remember to put a
cemicolon
(;) between the numbers.

Exercise 2:

(1) Write down the following 5 numbers in each pattern:

(a)

1 ;	3 ;	5 ;	7 ;	9 ;
-----	-----	-----	-----	-----

(b)

100 ;	95 ;	90 ;	85 ;	80 ;
-------	------	------	------	------

(c)

60 ;	80;	100;	120 ;
------	-----	------	-------

(d)

50 ;	100;	150;	200 ;	250;
------	------	------	-------	------

(e)

70 ;	100 ;	130 ;
------	-------	-------

Study the rule:

EXAMPLE A:



EXAMPLE B:



(2) Use the rules given and complete the number patterns.

(a)

Rule:	10
+ 4	

(b)

Rule:	7
+ 5	

(c)

Rule:	11
+ 10	

(d)

Rule:	80
-3	

(e)

Rule:	2	5	11
x 2, + 1			

(f)

Rule:	3	5
x 2, -1		

(3) Write down the rules in words.

(a)

6	12	18	24
---	----	----	----

(b)

1	5	9	13
---	---	---	----

Exercise 3:

Use the number card to complete the following questions.

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	♠	130
131	132	133	134	135	136	137	138	139	140
141	142	143	♣	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	♥	179	180
181	182	♦	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	*

(1) What numbers must be in the place of the following symbols?

(a) Clovers	(b) Spades	(c) Diamonds	(d) Hearts	(e)
♣	♠	♦	♥	*

(2) What number is 20 less than the number in (1)?

(a) Clovers	(b) Spades	(c) Diamonds	(d) Hearts	(e)
-------------	------------	--------------	------------	-----

(3) Write down the numbers as requested.

(a) The numbers in the first column.

(c) 10 more than 166

(e) 20 less than 171 and add 5

(g) 4 less than 122 and add 40

(i) $178 + 4 - 8 + 2$

(b) The numbers in the fourth row


(d) 20 more than 146

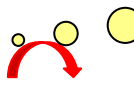
(f) 12 more than 141

(h) $160 + 10 - 5$

(j) $132 + 20 - 2$

(4) Complete a '10' and do the calculation from left to right.

(a)  $1 + 9 - 3 =$

(b)  $5 + 2 + 8 =$

EXAMPLE:

$$\begin{aligned} 3 + 16 + 4 \\ = 3 + 20 \\ = 23 \end{aligned}$$

(c) $3 + 7 - 1 =$


(e) $45 + 5 - 25 =$

(g) $46 + 14 - 30 =$

(i) $73 + 27 - 35 =$

(k) $124 + 56 + 15 =$

(m) $115 + 5 + 60 =$


 *(o) $132 + 6 + 8 =$

*(q) $241 + 25 + 19 =$

(d) $5 + 5 - 2 =$


(f) $7 + 13 - 6 =$

(h) $12 + 18 - 4 =$

(j) $132 + 18 - 10 =$

(l) $120 - 54 + 6 =$

(n) $346 + 4 + 25 =$


 *(p) $458 + 150 + 2 =$

*(r) $118 + 12 + \underline{\quad} =$

(5) Write down the missing numbers and the rule.

EXAMPLE:

(a)

75			150	175
----	--	--	-----	-----

Rule:

+ 25

(b)

1 000	950	900		
-------	-----	-----	--	--

(c)

70	85	100		
----	----	-----	--	--

(d)

		45	60	75
--	--	----	----	----

(e)

111	121	131		
-----	-----	-----	--	--

(f)

75	150	225		
----	-----	-----	--	--

Chapter A2

Place Value

A.2.1 Place value and number value:

This table represents the first 4 places left from the comma.

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

Remember:

It is always better to leave a gap between the hundreds and the thousands.

e.g. Six thousand four hundred and eleven = 6 411

Exercise 1:

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

(a) 687	(b) 704	(c) 1 527	(d) 3 603	(e) 3 005	(f) 1 215
---------	---------	-----------	-----------	-----------	-----------

(2) Write down the following numbers:

(a) Two thousand one hundred and fifteen

(b) Seven thousand nine hundred and twenty-four

(c) Nine thousand eight hundred and forty one

(d) Seven thousand seven hundred and eighty-seven

(e) * Twenty-three thousand eight hundred and ninety-nine

(f) * Fourteen thousand eight hundred and six

(g) * Twelve thousand six hundred and thirty-eight

(3) What number is represented?

(a) Each 'X' represents 1 unit.

(i)

Th	H	T	O
	X		
X	X		
X	X		X
X	X		X

(ii)

Th	H	T	O
X			
X			
X	X	X	
X	X	X	

(iii)

TTh	Th	H	T	O
		X		
		X		X
X		X	X	X
X	X	X	X	X

(iv)

TTh	Th	H	T	O
X				
X	X			
X	X			X

(b) Draw tables as indicated and complete the tables. (See example above.)

Each 'X' represents 2 unit.

(i)

Th	H	T	O
4	8	6	2

(ii)

Th	H	T	O
2	2	6	0

(iii)

TTh	Th	H	T	O
2	6	2	0	6

(iv)

TTh	Th	H	T	O
4	6	2	4	0

Exercise 2:

(1) Write in expanded notation. E.g. $34\ 189 = 30\ 000 + 4\ 000 + 100 + 80 + 9$

(a) $2\ 121 =$

(b) $4\ 021 =$

(c) $6\ 802 =$

* (d) $17\ 512 =$

* (e) $19\ 009 =$

* (f) $23\ 114 =$

REMEMBER:

$1T = 1 \times 10$

$1H = 1 \times 100$

$1Th = 1 \times 1\ 000$

$1TTh = 1 \times 10\ 000$

(2) Write down the missing numbers.

(a) $2\ 178 = (2 \times 1\ 000) + (1 \times 100) + (7 \times \underline{\hspace{2cm}}) + (8 \times \underline{\hspace{2cm}})$

(b) $3\ 510 = (3 \times \underline{\hspace{2cm}}) + (5 \times \underline{\hspace{2cm}}) + (1 \times 10)$

*(c) $27\ 600 = (2 \times \underline{\hspace{2cm}}) + (7 \times \underline{\hspace{2cm}}) + (6 \times \underline{\hspace{2cm}})$

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

*(e) $16\ 004 = (1 \times \underline{\hspace{2cm}}) + (6 \times \underline{\hspace{2cm}}) + (4 \times \underline{\hspace{2cm}})$

(3) Complete the more advanced sums.

(a) $3\ 178 = (3 \times 1\ 000) + (17 \times 10) + (8 \times 1)$

(b) $6\ 560 = (6 \times 1\ 000) + (56 \times \underline{\hspace{2cm}})$

- (c) $5\ 678 = (56 \times \underline{\hspace{2cm}}) + (78 \times \underline{\hspace{1cm}})$
- (d) $7\ 780 = (7 \times \underline{\hspace{2cm}}) + (7 \times \underline{\hspace{2cm}}) + (8 \times \underline{\hspace{1cm}})$
- (e) $2\ 346 = (2 \times \underline{\hspace{2cm}}) + (34 \times \underline{\hspace{1cm}}) + (6 \times 1)$
- (f) $7\ 400 = (74 \times \underline{\hspace{2cm}})$
- (g) $5\ 721 = (57 \times \underline{\hspace{2cm}}) + (21 \times \underline{\hspace{1cm}})$
- (h) $4\ 500 = (45 \times \underline{\hspace{2cm}})$
- (i) $6\ 940 = (69 \times \underline{\hspace{2cm}}) + (4 \times \underline{\hspace{2cm}})$
- (j) $12\ 352 = (12 \times \underline{\hspace{2cm}}) + (352 \times \underline{\hspace{1cm}})$

Exercise 3:

(1) Place value recognition.

(a) Write down the following numbers:

- | | |
|--------------------|--------------------|
| (i) 8 ones | (ii) 4 tens |
| (iii) 12 tens | (iv) 7 thousand |
| (v) 16 hundred | (vi) 4 thousand |
| *(vii) 72 tens | *(viii) 10 hundred |
| *(ix) 24 thousand | *(x) 163 tens |
| *(xi) 170 tens | *(xii) 211 tens |
| *(xiii) 1 400 ones | *(xiv) 12 thousand |

(b) Write down the correct numbers.

Use draft paper if necessary for your calculations.

- | | |
|---------------------|----------------------------|
| (i) 10 T + 5 O | (ii) 7 Th + 8 H + 12 O |
| (iii) 23 O + 13 H | (iv) 13 H + 8 T + 2 O |
| (v) 13 H + 12 T | (vi) 12 T + 8 O + 4 Th |
| (vii) 2 Th + 23 T | (viii) 13 T + 1 H + 2 O |
| (ix) 6 H + 4 H + 2T | (x) 6 Th + 3 H + 5 T + 6 O |

(xi) $45 \text{ Th} + 23 \text{ T} =$

(xii) $3 \text{ H} + 3 \text{ T} + 14 \text{ O} =$

*(xiii) $13 \text{ H} + 7 \text{ Th} + 5 \text{ T} + 2 \text{ O}$

*(xiv) $36 \text{ T} + 7 \text{ H} + 14 \text{ Th} + 12 \text{ O}$

*(xv) $7 \text{ Th} + 120 \text{ H} + 12 \text{ O} + 6 \text{ H}$

*(xvi) $3 \text{ Th} + 15 \text{ T} + 4 \text{ H} + 23 \text{ Th}$

(2) Draw a table as shown below and write down the place value and the number value of the underlined digits.

	NUMBER	PLACE VALUE	NUMBER SENTENCE	NUMBER VALUE IN EXPANDED NOTATION
(a)	<u>2</u> 678	2 Th	2 000	$2 \times 1\,000$
(b)	47 <u>12</u> 1	12 T	120	12×10
(c)	<u>1</u> 567			
(d)	<u>7</u> 682			
(e)	4 <u>879</u>			
(f)	7 <u>614</u>			
(g)	<u>1870</u>			
*(h)	<u>40</u> 765			
*(i)	<u>15</u> 982			
*(j)	<u>34 580</u>			

There are various options.

(3) Write down the following numbers:

(a) $2 \text{ Th} + 1 \text{ H} + 3 \text{ T} + 6 \text{ O}$	(b) $4 \text{ Th} + 6 \text{ H} + 13 \text{ O}$
(c) $11 \text{ O} + 16 \text{ H} + 23 \text{ Th}$	(d) $*2 \text{ H} + 2 \text{ Th} + 5 \text{ O} + 1 \text{ TTh}$
(e) $*2 \text{ Th} + 24 \text{ H} + 3 \text{ T} + 6 \text{ O}$	(f) $*124 \text{ O} + 2 \text{ Th} + 6 \text{ TTh}$

(4) More advanced sums:

EXAMPLE: $7\,837 = 78 \text{ H} + 2 \text{ T} + 17 \text{ O}$

(a) $3\,578 = 35 \text{ H} + \underline{\hspace{2cm}} \text{ T} + 8 \text{ O}$

(b) $4\,678 = 4 \text{ Th} + \underline{\hspace{2cm}} \text{ H} + \underline{\hspace{2cm}} \text{ O}$

(c) $5\,718 = 3 \text{ Th} + \underline{\hspace{2cm}} \text{ H} + 18 \text{ O}$

(d) $1\,316 = 13 \text{ H} + 2 \text{ O} + \underline{\hspace{2cm}} \text{ O}$

(e) $4\,789 = 2 \text{ Th} + \underline{\hspace{2cm}} \text{ H} + 5 \text{ T} + \underline{\hspace{2cm}} \text{ O}$

(f) $*21\,418 = \underline{\hspace{2cm}} \text{ H} + \underline{\hspace{2cm}} \text{ O}$

Exercise 4:

(1) Write down the correct numbers.

- | | |
|---------------------|-------------------|
| (a) 3 x 1 T | (b) 4 x 10 |
| (c) 6 x 1 H | (d) 15 x 10 |
| (e) 1 x 1 Th | (f) 14 x 10 |
| (g) 18 x 100 | (h) 3 x 1 000 |
| (i) 12 x 1 Th | (j) 13 x 100 |
| (k) 10 x 1 H | (l) 10 x 10 X 10 |
| (m) 100 x 10 | (n) 3 x 1 T X 1 T |
| (o) 70 x 100 | (p) 23 x 10 x 10 |
| (q) 3 x 2 x 10 x 10 | (r) 2 x 2 x 100 |
| *(s) 20 x 2 x 100 | *(t) 40 x 4 X 10 |

EXAMPLE:

60	can also be written as	6 x 10	or	6 x 1 x 10
6 000		6 x 10 x 10 x 10		6 x 100 x 10
THEREFORE: 6 000 = 60 H OF 600 T				

(2) Write down the numbers given in 2 different ways.

- | | |
|------------|-----------|
| (a) 400 | (b) 2 100 |
| (c) 40 000 | (d) 1 120 |
| (e) 21 600 | |

There are several possibilities.

(3) Fill in < ; > or = :

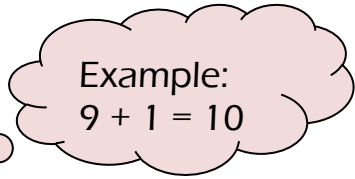
- | | |
|--------------------------------------------|--------------------------------------------|
| (a) 2 x 10 <input type="text"/> 2 T | (b) 300 <input type="text"/> 1 H + 20 T |
| (c) 12 T <input type="text"/> 2 H | (d) 6 D <input type="text"/> 3 Th+ 30 O |
| (e) 10 x 200 <input type="text"/> 20 H | (f) 10 X 10 X 10 <input type="text"/> 10 H |
| (g) 50 <input type="text"/> 5 x 10 x 10 | (h) 1 500 <input type="text"/> 15 |
| (i) 4 Th + 12 H <input type="text"/> 5 200 | (j) 10 H <input type="text"/> 1 000 |

- (k) $2 \text{ Th} + 18 \text{ H}$ $4 \text{ Th} - 2 \text{ H}$
- *(m) 12 Th 120 H
- (o) 4 000 40×10
- (q) 1 000 $10 \text{ H} - 10$
- (s) 3 567 3 765

- (l) $2 \times 10 \text{ T}$ 20 T
- *(n) $7 \text{ D} \times 0$ 7 000
- (p) 5 Th $10 \times 10 \times 5$
- (r) 15 H 15×100
- (t) 3 698 3 986

Write down the number sentence and then the answer.

(4) Add '1' to each of the following numbers.



+1	(a) 9	(b) 19	(c) 899	(d) 999	(e) 1 999	(f) 9 999	(g) 19 999
----	-------	--------	---------	---------	-----------	-----------	------------

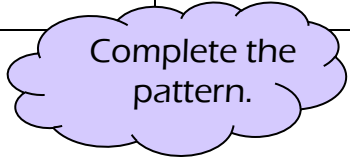
(5) Add '10' to each of the following numbers.

+10	(a) 9	(b) 99	(c) 999	(d) 1 099	(e) 1 999	(f) *9 999
-----	-------	--------	---------	-----------	-----------	------------

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

+100	(a) 9	(b) 99	(c) 999	(d) 1 999	(e) *9 999	(f) *19 999
------	-------	--------	---------	-----------	------------	-------------

Study the following:



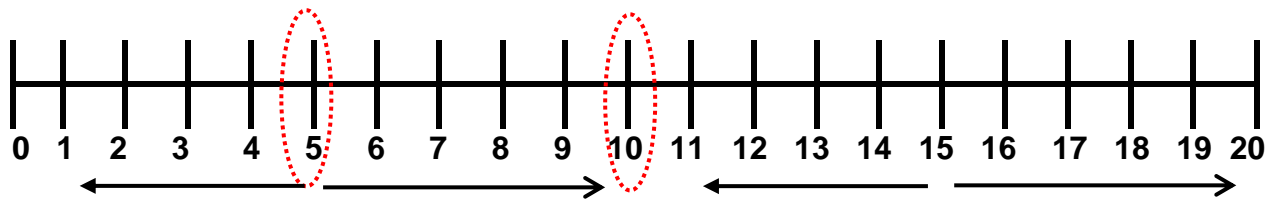
$1 \text{ 000} = 10 \times 10 \times 10$ **or** 100×10

$10 \text{ 000} = 10 \times 10 \times 10 \times 10$ **or** 100×100 **or** $1 \text{ 000} \times 10$

$100 \text{ 000} = 10 \times 10 \times 10 \times 10 \times 10$ **or** $1 \text{ 000} \times 100$ \rightarrow

A.2.2 ROUNDING:

ROUND TO THE NEAREST '10'



Exercise 5:

(1) Round to the nearest '10'.

- (a) 61 \approx
 (d) 132 \approx
 (g) 1 453 \approx
 (j) 7 677 \approx
 (m) 9 401 \approx

- (b) 59 \approx
 (e) 618 \approx
 (h) 1 271 \approx
 (k) 9 309 \approx
 *(n) 15 467 \approx

- (c) 209 \approx
 (f) 499 \approx
 (i) 1 999 \approx
 (l) 4 989 \approx
 (o) 6 044 \approx

(2) Round the numbers to the nearest 10 and give an estimated answer

EXAMPLE: $121 + 212 + 142 \approx 120 + 210 + 140 \approx \underline{470}$

(a) $121 + 71 \approx 120 + 70 \approx 190$

(c) $453 + 218 \approx$

(e) $567 + 41 \approx$

(g) $455 + 46 \approx$

(i) $555 + 999 \approx$

(k) $5\,654 + 124 \approx$

(m) $7\,812 + 145 \approx$

(b) $137 + 129 \approx$

(d) $875 + 452 \approx$

(f) $347 + 152 \approx$

(h) $124 + 167 \approx$

(j) $672 + 331 \approx$

(l) $11\,201 + 125 \approx$

(n) $156 + 156 \approx$

EXAMPLE: Round to the nearest 100:

HTh	TTh	Th	H	T	O
		8	9	5	6

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

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

(a) $161 (10) \approx$

(b) $7\,899 (10) \approx$

(c) $1\,389 (100) \approx$

(d) $9\,954 (100) \approx$

(e) $8\,233 (1\,000) \approx$

(f) $5\,078 (1\,000) \approx$

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

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

(2) Draw the table in your workbook. Round the numbers.

	NUMBER	Nearest 10	Nearest 100	Nearest 1 000
(a)	156			
(b)	2 438			
(c)	3 454			
(d)	9 451			
(e)	1 111			
(f)	4 736			
(g)	2 579			
(h)	2 318			
* (i)	43 102			
* (j)	16 883			
* (k)	23 405			
* (l)	19 999			

A2.3 REVISION EXERCISE

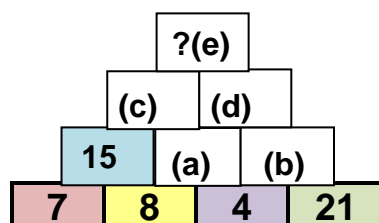
(1) (a) Write down all the even numbers that are shown in the table below. **(6)**
($\frac{1}{2}$ mark each)

2	9	4	45	488	3 670	132 568	3 400	1 455	4 015
---	---	---	----	-----	-------	---------	-------	-------	-------

(b) Write down all the uneven numbers that are shown in the table below

5	4	1	50	3	4 562	2 341	2 000	3 005	23 451	32
---	---	---	----	---	-------	-------	-------	-------	--------	----

(2) Fill in the missing answers. **(5)**



(3) What number is suggested? (5)

- (a) $2\text{ H} + 3\text{ Th} + 6\text{ T} + 7\text{ O} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$
- (b) $8\text{ T} + 3\text{ H} + 7\text{ Th} + 5\text{ O} + 2\text{ O} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$
- (c) $1\text{ Th} + 6\text{ H} + 2\text{ T} + 5\text{ O} + 7\text{ O} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$
- *(d) $120\text{ O} + 6\text{ H} + 12\text{ T} + 9\text{ O} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$
- *(e) $12\text{ T} + 12\text{ H} + 12\text{ O} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

- (a) $2\ 367$ (100) \approx
- (b) $12\ 789$ (10) \approx
- (c) $4\ 738$ (100) \approx
- (d) 999 (1000) \approx

(5) Complete the number patterns. (6)

(1 mark for each correct row)

(a)	25	50							
(b)	15		45	60					
(c)	45	90							
(d)	345	355							
(e)	1	4	9						
(f)	12	13	15						

(6) Study the number and answer the following questions.

Write 'true' of 'false'.

5 789

(5)

- (a) This number can also be written as: $5\text{ Th} + 78\text{ T} + 0\text{ O}$
- (b) There are $57\text{ H} + 89\text{ O}$
- (c) The number is an even number
- (d) There are 578 T
- (e) The number can also be written as $(578 \times 100) + (8 \times 10) + 9$

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

- (a) 237 (10) \approx
- (b) $3\ 856$ (1 000) \approx
- (c) $3\ 192$ (100) \approx
- (d) $9\ 999$ (100) \approx

(8) Write down the correct answers. (10)

- (a) $490 + 20$
- (b) $990 + 10$
- (c) $10 \times 10\text{ T}$
- (d) $1\ 990 + 10$
- (e) 3×100
- (f) 465×10
- (g) $6 \times 10 \times 10$
- (h) $20 \times 10 \times 10$
- (i) $13 \times 10\text{ T}$
- (j) $80 + (1 \times 100)$

(9)

Fill in < ; > or = :

(20)

(a)	$4\ 000 + 700 + 40 + 1$	<input type="text"/>	4 471	(b)	$1\ 200$	<input type="text"/>	12 H
(c)	$2\ 000 + 400 + 16$	<input type="text"/>	2 416	(d)	$6\ H + 4\ H$	<input type="text"/>	1 000
(e)	$12\ Th + 3\ H + 60$	<input type="text"/>	12 360	(f)	$2\ H + 7\ T$	<input type="text"/>	27 T
(g)	$3\ H + 4\ H + 7\ T$	<input type="text"/>	7 007	(h)	$12\ T + 10\ T$	<input type="text"/>	2 200
(i)	24×100	<input type="text"/>	24 400	(j)	$2\ Th + 12\ H$	<input type="text"/>	3 200
(k)	60 000	<input type="text"/>	$60 \times 60 \times 60$	(l)	$12\ H + 12\ H$	<input type="text"/>	2 400
(m)	14 H	<input type="text"/>	140	(n)	$2 \times 10\ T$	<input type="text"/>	2 000
(o)	(3×1000)	<input type="text"/>	$10 \times 10 \times 10 \times 3$	(p)	$2 \times 50\ T$	<input type="text"/>	1 000
(q)	$27\ T - 12\ E$	<input type="text"/>	272 O	(r)	$2 \times 5\ T$	<input type="text"/>	100
(s)	$9\ Th + 240\ T$	<input type="text"/>	$12\ 000 - 600$	(t)	$10 \times 10\ T$	<input type="text"/>	1 000

- (9) What is the difference between the '3' in 3 654 and the '3' in 1 438? (2)
- (10) What is half of the '7' in the number 4 754? (1)
- (11) How many 'tens' must be added to 35 789 to get a result of 35 919? (1)
- (12) How many 'tens' must be subtracted from 10 000 to get a result of 8 500? (1)

Total out of 70

CHAPTER A3

Basic Operations

A3.1 Addition:

METHOD 1
USE EXPANDED NOTATION TO WRITE THE FOLLOWING NUMBERS.

$1\ 346 + 2\ 567 =$

$1\ 346 = 1\ 000 + 300 + 40 + 6$
 $2\ 567 = 2\ 000 + 500 + 60 + 7$

$3\ 000 + 800 + 100 + 13$ = $3\ 000 + 900 + 0 + 13$
= $3\ 913$

Exercise 1:

- (1) Use method 1 or any other method to do the sums.

(a) $1\ 465 + 1\ 123 =$	(b) $3\ 698 + 1\ 352 =$	(c) $6\ 467 + 7\ 484 =$
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- (2) Do the following sums:

(a) $1\ 362 + 1\ 263$	(b) $2\ 674 + 3\ 451$	(c) $1\ 562 + 2\ 083$
(d) $3\ 456 + 6\ 666$	(e) $5\ 392 + 599$	(f) $5\ 789 + 3\ 567$

METHOD 2 USE THE 'ADD ON' METHOD TO DO THE FOLLOWING SUMS
564 + 423 = 564 + 400 → 964 + 20 → 984 + 3 → 987

Exercise 2:

(1) Use the 'add on' method to complete the following sums

(a) **738 + 241 =**
 738 + 200 → + 40 → + 1 →

(b) **426 + 155 =**
 426 + 100 → + 50 → + 5 →

(c) **679 + 249 =**
 679 + 200 → + 40 → + 9 →

(d) **1 468 + 2 288 =**
 1 468 + 2 000 → + 200 → + 80 →
↓ + 8

(2) Use the 'add on' method to calculate how many points each school obtained.

(a) 75 + 20 → _____ + 6 → _____ + 12 → _____

(b) 134 + 70 → _____ + 20 → _____ + 15 → _____

(c) 756 + 20 → _____ + 30 → _____ + 14 → _____

(d) 418 + 12 → _____ + 40 → _____ + 25 → _____

(e) 644 + 16 → _____ + 20 → _____ + 50 → _____

(f) 737 + 23 → _____ + 60 → _____ + 25 → _____

METHOD 3- VERTICAL METHOD	
<p>(A) $1\,257 + 877 =$</p> $\begin{array}{r} 1\,257 \\ \underline{877} \\ + 2\,134 \end{array}$	<p>(B) $1\,257 + 877 =$</p> $\begin{array}{r} 1\,257 \\ \underline{877} \\ 14\ (7+7) \\ 120\ (50+70) \\ 1000\ (200+800) \\ \underline{1000}\ (1000+0) \\ 2134 \end{array}$

Exercise 3:

(1) Use the vertical method 3 to do the following.

(a) $235 + 343$	(b) $537 + 252$	(c) $899 + 155$
(d) $478 + 262$	(e) $305 + 314$	(f) $454 + 432$
(g) $1\,306 + 1\,316$	(h) $1\,230 + 4\,344$	(i) $1\,231 + 2\,454$

(2) Do the following.

(a) $182 + 312 + 456 =$	(b) $2\,467 + 153 + 452 =$	(c) $1\,541 + 3\,544 =$
(d) $3\,450 + 2\,416 + 299 =$	(e) $4\,571 + 770 + 4\,291 =$	(f) $2\,569 + 1\,201 =$

A3.2 Subtraction:

METHOD 1 – REPEATED SUBTRACTION
<p>$468 - 213 =$</p> <p>$468 - 200 \rightarrow 268 - 10 \rightarrow 258 - 3 \rightarrow 255$</p>

Exercise 4:

(1) Make use of repeated subtraction to do the following.

(a) $587 - 244 =$	$587 - 200 \rightarrow$ 	$- 40 \rightarrow$ 	$- 4 \rightarrow$
(b) $984 - 531 =$	$984 - 500 \rightarrow$ 	-30 	$-1 \rightarrow$

(c) $876 - 534 =$
 $876 - 500 \rightarrow$ $- 30 \rightarrow$ $- 4 \rightarrow$

(d) $1\ 674 - 1\ 567 =$
 $1\ 674 - 1\ 000 \rightarrow$ $- 500 \rightarrow$ $- 60 \rightarrow$
↓ - 7

(2) Calculations with '1 000'.

(a) $1\ 000 - 400$

(b) $1\ 000 - 300$

(c) $1\ 000 - 125$

(d) $1\ 000 - 450$

(e) $1\ 000 - 990$

(f) $1\ 000 - 50$

(g) $1\ 000 - 50$

(h) $1\ 000 - 150$

(i) $1\ 000 - 500$

(j) $1\ 000 - 200$

(k) $1\ 000 - 375$

(l) $1\ 000 - 600$

(3) Repeated subtraction of the same number.

(a) $100 - 25 - 25 - 25$

(c) $100 - 10 - 10 - 10$

(b) $1\ 000 - 250 - 250$

(d) $70 - 20 - 20 - 20$

(e) $90 - 15 - 15 - 15$

(f) $75 - 5 - 5 - 5 - 5$

METHOD 2 – EXPANDED NOTATION.

$1\ 674 - 213 =$

$$\begin{array}{r} 1\ 674 = 1\ 000 + 600 + 70 + 4 \\ - 213 = \underline{200 + 10 + 3} \\ 1\ 000 + 400 + 60 + 1 = 1\ 461 \end{array}$$

Exercise 5:

(1) Use the expanded notation method or any other method to do the following:

(a) $569 - 421$

(b) $678 - 235$

(c) $985 - 874$

(d) $782 - 589$

(2) Do the following.

(a) $1\ 378 - 1\ 236$

(b) $2\ 145 - 612$

(c) $3\ 278 - 1\ 634$

(d) $5\ 400 - 2\ 290$

(e) $9\ 651 - 2\ 128$

(f) $9\ 400 - 199$

METHOD 3 – VERTICAL METHOD	
<p>(A) $973 - 345 =$</p> $\begin{array}{r} \overset{6}{9} \overset{1}{7} 3 \\ - 345 \\ \hline 628 \end{array}$	<p>(B) $973 - 345 =$</p> $\begin{array}{r} 973 \\ - 345 \\ \hline 8(13-5) \\ 20(60-40) \\ \hline 600(900-300) \\ \hline 628 \end{array}$

Exercise 6:

(1) Use the vertical method (3) or any other method to do the following sums.:

(a) $987 - 343$

(b) $1567 - 652$

(c) $1483 - 879$

(d) $1567 - 678$

(e) $3378 - 1632$

(f) $4543 - 1437$

(g) $4346 - 1365$

(h) $2830 - 1344$

(i) $7000 - 454$

A3.3 MIXED OPERATIONS:**Exercise 7:**

(1) Use any method to do the following addition and subtraction sums.

(a) $6578 - 1685$

(b) $1563 - 862$

(c) $2579 + 3785$

(d) $3525 + 2789$

(e) $3746 - 1657$

(f) $1000 - 765$

(g) $4567 + 1387$

(h) $2000 - 589$

(i) $2678 - 1469$

(j) $2791 - 1456$

(k) $1321 - 999$

(l) $1564 + 877$

A3.4 Addition and Subtraction as inverse operations:

To check the answer of an addition sum, you must subtract the numbers and the other way around.

EXAMPLE:

<u>ADDITION</u>	<u>SUBTRACTION</u>
$\begin{array}{r} 2117 \\ + 739 \\ \hline 2856 \end{array}$	$\begin{array}{r} 2856 \\ - 739 \\ \hline 2117 \end{array}$

Exercise 8:

Check the answers of the following questions by doing the inverse operation.

(a) $435 + 432 = 857$	(b) $2\,011 + 4\,677 = 6\,688$
(c) $2\,903 + 3\,812 = 6\,715$	(d) $3\,240 - 432 = 2\,808$
(e) $554 + 612 = 1\,646$	(f) $1\,782 - 443 = 1\,339$
(g) $873 + 411 = 1\,773$	(h) $3\,552 - 2\,240 = 1\,312$
(i) $1\,000 - 675 = 225$	(j) $2\,400 - 1\,250 = 1\,375$

Exercise 9:

Do the following word sums. Each sum must consist of 3 basic steps.

Number sentence:	Calculation:	Answer sentence:
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(1) There are 476 books on a shelf. 315 books fall of the shelf. How many books are left on the shelf?

(2) There are 467 boys in the school and 212 girls in the school. How many children are in the school?

(3) Calculate the **sum** of 1 482 and 387

(4) Calculate the **difference** between 3 542 and 1 278

(5) How many must be added to 2 815 to get a result of 5 000?

(6) Two schools participate at an athletic meeting. The school that lost, lost each event with 13 points.