ENGLISH

MATHEMATICS WORKSHEET

GRADE 4 | TERM 1

basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

Read to Lead
A Reading Nation is a Leading Nation

2030 NDP

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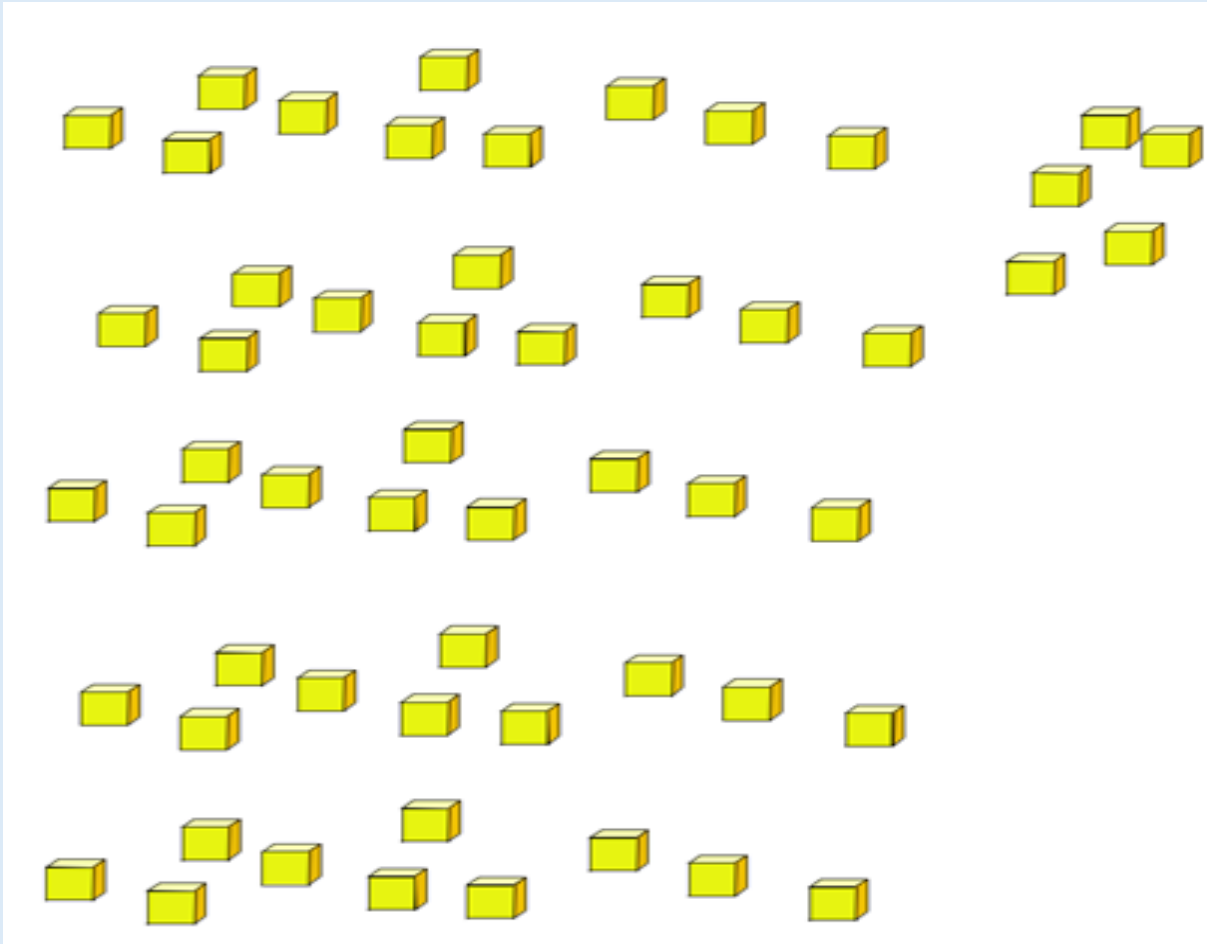
UNIT 1: WHOLE NUMBERS

1.1. Number names and number symbols

Date		Classwork		Homework	

1. How many cubes are shown below? Write your answer in words, for example *thirty-four*.



2. Write the number symbols for all the whole numbers from four hundred and twenty one up to four hundred and fifty.

3. Complete the table by writing the number symbol or number name where appropriate.

Number symbol	**Number Name**
203	Two hundred and three
233	
	Seven hundred and thirty-five
802	
	Nine hundred and nine
999	

203	Two hundred and three
233	
	Seven hundred and thirty-five
802	
	Nine hundred and nine
999	

Signature:		**Date:**	

1.2. Number names and place value parts

Date		Classwork		Homework	

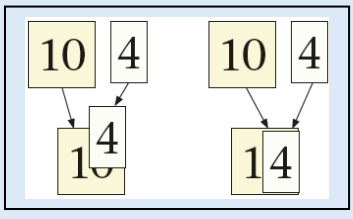
You already know that we have *single* digits for the numbers one to nine, as shown below.

One	1									
Two	2									
Three	3									
Four	4									
Five	5									
Six	6									
Seven	7									
Eight	8									
Nine	9									

We do not have a single symbol for ten, or for numbers larger than ten. For larger numbers we use ***combined*** symbols like 10, 11, 12, 17, 34, 68 and so on.

The number name ***fourteen*** means ***four*** and ***ten***. The parts that are mentioned in the number are called ***place value parts***

Look at number 14, for example: The symbol 14 shows that the number has two parts: 10 and 4. The 4 sits on top of the 0, as shown aside.



1. Look at the place value parts given in each row below. Which number is formed by combining the different place value parts? Write the number name and the number symbol.

Place value parts	**Number name**	**Number symbol**
40 and 7		
600, 40 and 3		
300 and 8		
700 and 50		
600 and 2		

40 and 7		
600, 40 and 3		
300 and 8		
700 and 50		
600 and 2		

2. Complete the following table.

Number name	**Number symbol**	**Place value parts**
Eight hundred and seventy-five		800, 70 and 5
	672	
One hundred and sixty		
		300 and 2
	999	

Eight hundred and seventy-five		800, 70 and 5
	672	
One hundred and sixty		
		300 and 2
	999	

Signature:		**Date:**	

1.3. Number names, number symbols and expanded notation

Date		Classwork		Homework	

1. Look at the figure below and answer the questions that follow:

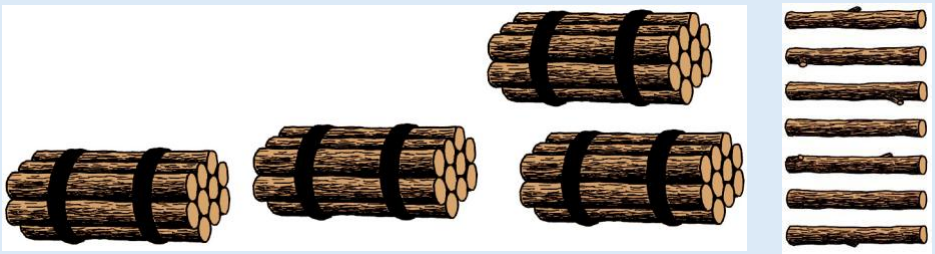
The number ***eighteen*** has two **place value parts**: 10 and 8. The **number symbol** for eighteen is 18. 18 = 10 + 8. When you write 18 as 10 + 8, you are using **expanded notation**.

a) What are the place value parts of nineteen?

b) What is the number symbol for nineteen?

c) Represent nineteen in expanded notation

2. Each bundle has 10 sticks. Complete the table to show the total number of sticks.



Number symbol		
Number name		
Place value parts		
Expanded notation		

Signature:		**Date:**	

1.4. Number names, number symbols and expanded notation, continued

Date		Classwork		Homework	

1. Complete the following table:

Number name	Expanded notation
Eight hundred and fifty-seven	
	600 + 40 + 9
Nine hundred and two	
	5 + 400

Eight hundred and fifty-seven	
	600 + 40 + 9
Nine hundred and two	
	5 + 400

2. Complete

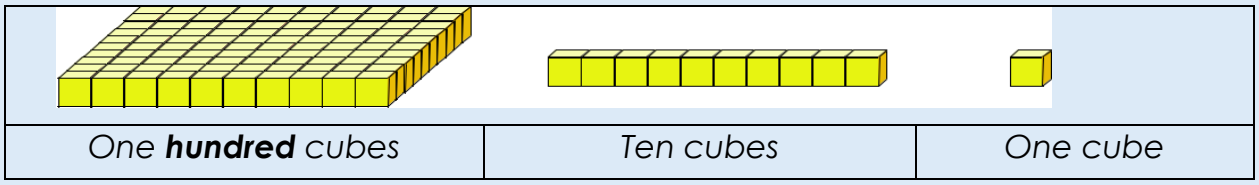
Number names from 907 to 912	Number symbol	Expanded notation

Signature:		Date:	

1.5. Place value of numbers to at least 3-digit numbers

Date		Classwork		Homework	

1. Look at what this picture shows you:



*One **hundred** cubes*	*Ten cubes*	*One cube*

a) How many single cubes are there in 1 stack of 10 cubes?

b) How many single cubes are there in 10 stacks of 10 cubes each?

c) How many stacks of 10 cubes are there in 10 stacks of 10 cubes each?

2. Look at the figure in No. 1 and answer the questions that follow:

a) How many ones are there in a 10?

b) How many ones are there in a 100?

c) How many tens are there in a 10?

d) How many tens are there in a 100?

3. Given 222, complete

a) How many tens are there in 20?

b) How many tens are there in 200?

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1.6. More place value of numbers to at least 3-digit numbers

Date		Classwork		Homework	

The "2" in 829 is in the place where the number of tens is shown. The "2" in 829 tells us that there are 2 tens in 829. 829 = 800 + 20 + 9. 829 = 8 hundreds + 2 tens + 9 ones. We can say the place value of the "2" in 829 is tens and the place value part is 20

Hundreds	Tens	Ones
8	2	9

The symbol for **one ten** is **10**. The symbol for **one hundred** is **100**.The symbol for **ten tens** is 100.

1. The number 829 has three place value parts: 800, 20 and 9. What part does the "7" in each of the following numbers represent?

a) 573

b) 357

c) 735

2. Look at No. 1 above and answer the questions that follow:

a) How do you know that the "7" in 573 means 70, and not 7 or 700?

b) How do you know that the "7" in 357 means 7, and not 70 or 700?

c) How do you know that the "7" in 735 means 700, and not 7 or 70?

3. Write the number in words and the place value of the underlined digit.

Number	Words	Place value
2<u>9</u>0		
<u>6</u>23		
30<u>5</u>		

2<u>9</u>0		
<u>6</u>23		
30<u>5</u>		

Signature:		Date:	

1.7. Representing numbers and place value of numbers to at least 4-digit numbers

Date		Classwork		Homework	

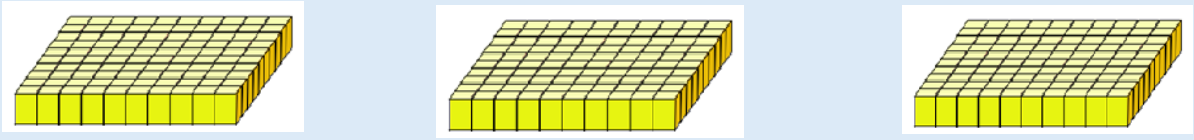
1. 300 sticks are shown below, in three heaps of sticks of 100 each.

a) How many sticks are there in 2 heaps of 10 bundles of sticks each?

b) How many sticks are there in 5 heaps of 10 bundles of sticks each?

c) How many sticks are there in 7 heaps of 10 bundles of sticks each?

2. 300 cubes are shown below in three stacks of 100 each.



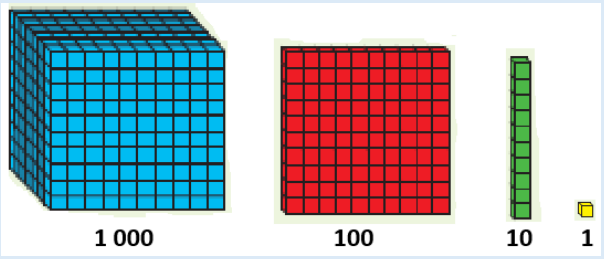
a) How many stacks of 10 cubes are there in 2 stacks of 100 cubes each?

b) How many stacks of 10 cubes are there in 4 stacks of 100 cubes each?

c) How many stacks of 10 cubes are there in 8 stacks of 100 cubes each?

d) How many stacks of 10 cubes are there in 10 stacks of 100 cubes each?

3. Use the figure to answer the questions that follow.



10 hundreds are called **one thousand**. The symbol for one thousand is **1 000**.

When we write the number symbol **1 000**, we usually leave a space between the 1 and the 000. This makes it easier to read the number.

a) In the figure below, how many place value parts does the number have?

b) What number is represented by the figure?

c) What are the place value parts of the number?

d) Write the number in expanded notation.

e) Express the number in words

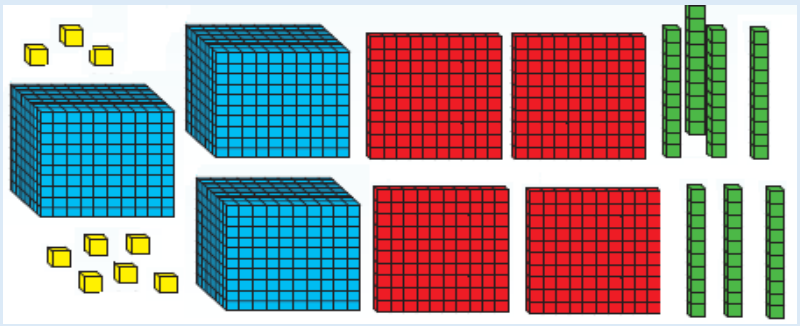
4. Given 7 825. What are the place value parts of the number?

Signature:		Date:	

1.8. More representing numbers and place value of numbers to at least 4-digit numbers

Date		Classwork		Homework	

1. Look at the figure



a) How many place value parts does the number have?

b) What number is represented by the figure?

c) What are the place value parts of the number?

d) Write the number in expanded notation.

e) Express the number in words.

2. Write the number name whose place value parts are:

Place value parts	Number name
8 000, 50, 600 and 7	
500, 2 000, 3 and 40	

8 000, 50, 600 and 7	
500, 2 000, 3 and 40	

Signature:		Date:	

1.9. More representing numbers, place value parts and place value

Date		Classwork		Homework	

1. The number 829 has three place value parts: 800, 20 and 9. What part does the "8" in each of the following numbers represent?

a) 4 689

b) 7 358

c) 8 735

d) 7 835

2. Look at No.1 and answer the questions that follow:

a) How do you know that the "8" in 4 689 means 80, and not 8 or 800 or 8 000?

b) How do you know that the "8" in 7 358 means 8, and not 80 or 800 or 8 000?

c) How do you know that the "8" in 8 735 means 8 000, and not 8 or 80 or 800?

d) How do you know that the "8" in 7 835 means 800, and not 8 or 80 or 8 000?

3. The place value parts of a number are given below. Write the number name and number symbol.

Place value parts	Number symbol	Number name
8 and 3 000		

8 and 3 000		

Signature:		Date:	

1.10. More representing numbers, place value parts and place value

Date		Classwork		Homework	

1. Complete the table looking at the underlined digit.

Number	Place value part	Place value	
		Words	Abbreviation
8 6**8**4			
2 00**8**			
3 064			

8 6**8**4			
2 00**8**			
3 064			

2. In the given numbers, write the number in words and write the place value of the underlined digit.

Number	Words	Place value
4 2**7**0		
1 **7**23		
7 301		
9 03**7**		
8 0**0**8		
9 999		

4 2**7**0		
1 **7**23		
7 301		
9 03**7**		
8 0**0**8		
9 999		

Signature:		Date:	

1.11. Counting backwards and forwards

Date		Classwork		Homework	

1. Count forwards in 3s from 1 000 to 1 030 and write the number symbols and number names as you go along.

Number symbols	Number name
1 000	One thousand

1 000	One thousand

Signature:		Date:	

1.12. Counting backwards and forwards, continued

Date		Classwork		Homework	

1. Count forwards in 2s from 8 997 to 9 005 and write the number symbols and number names as you go along.

Number symbols	Number name
8 997	Eight thousand nine hundred and ninety-seven

8 997	Eight thousand nine hundred and ninety-seven

2. Count backwards in 5s from 1 005 to 990 and write the number symbols and number names as you go along.

Number symbols	Number name
1 005	One thousand and five

1 005	One thousand and five

Signature:		Date:	

1.13. Counting backwards and forwards, continued.

Date		Classwork		Homework	

1. Count forwards in 10s from 2 988 to 3 018 and write the number symbols and number names as you go along.

Number symbols	Number name
2 988	Two thousand nine hundred and eighty-eight

2 988	Two thousand nine hundred and eighty-eight

2. Count backwards in 25s from 1 075 to 975 and write the number symbols and number names as you go along.

Number symbols	Number name
1 075	One thousand and seventy-five

1 075	One thousand and seventy-five

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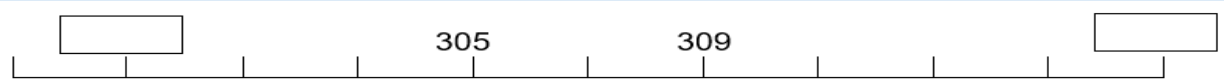
1.14. More counting backwards and forwards in different intervals

Date		Classwork		Homework	

1. Complete the boxes in each number line. Write the interval for counting. Write the number name and expanded notation for each number you have completed.

a)



Counting Interval:

Number symbol	Number name	Expanded notation

b)

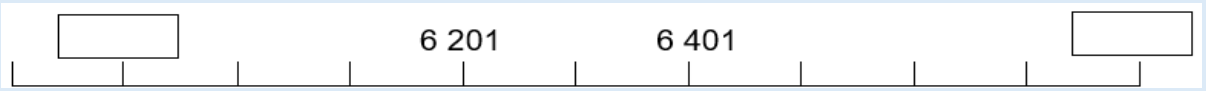
Counting Interval:

Number symbol	Number name	Expanded notation

c) 

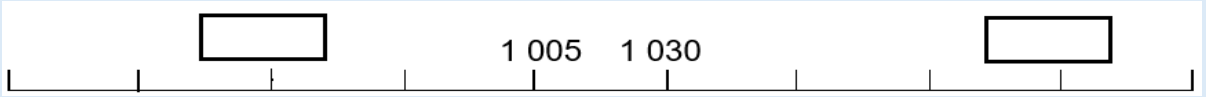
Counting Interval:

Number symbol	Number name	Expanded notation

d) 

Counting Interval:

Number symbol	Number name	Expanded notation

e) 

Counting Interval:

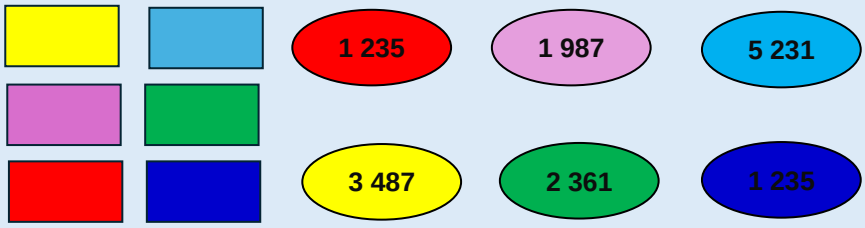
Number symbol	Number name	Expanded notation

Signature:		Date:	

1.15. Ordering numbers

Date		Classwork		Homework	

1. Choose the colour on the left. Find the matching colour on the right. Choose two numbers smaller and two numbers bigger than the number with the same colour you chose (if possible).



Number of the colour chosen	Numbers smaller than the number	Numbers bigger than the number

2. Arrange the numbers from smallest to biggest.

To arrange numbers from biggest to smallest, look at the number value of the biggest place value. If the number value is bigger, then the number is the biggest. If the number values are equal, move on to the next place value.

a) 479 989 201 609 183 685

b) 6 152 9 987 5 423 9 899 4 777 3 356

c) 5 256 5 879 4 423 5 999 5 666 5 653

d) 1 173 1 137 1 713 1 317 1 371 1 731

3. Arrange the numbers from biggest to smallest.

a) 810 775 309 899 785 459

b) 8 705 8 715 8 701 8 710 8 738 8 725

c) 9 121 9 119 9 112 9 191 9911 9 211

d) 1 015 1 051 1 105 1 150 1 501 1 510

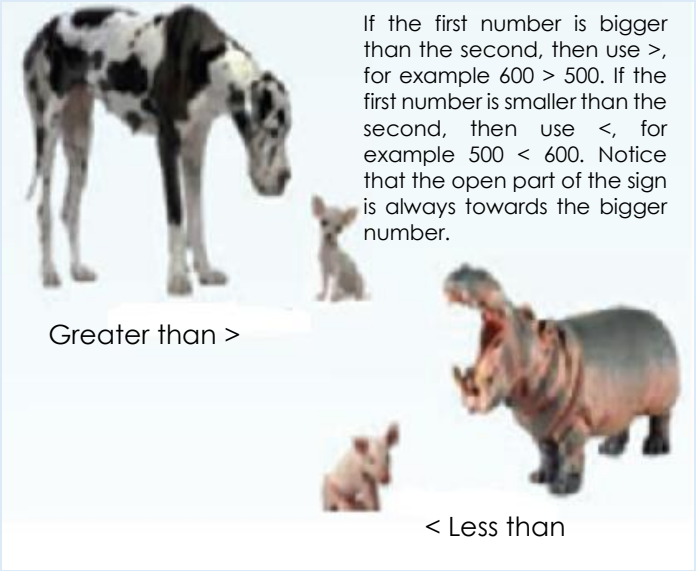
e) 4 111 5 555 7 777 9 000 8 000 6 000

Signature:		**Date:**	

1.16. Comparing numbers

Date		Classwork		Homework	

1. In each case, decide which is the biggest of the two numbers. Use the symbol > or < or =.



a) 498 and 902

498 902	498 902

b) 3 676 and 3 667

3 676 3 667	3 676 3 667

c) 9 219 and 9 289

9 219 9 289	9 219 9 289

d) 6 653 and 6 635

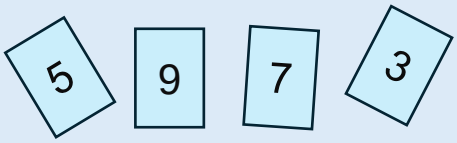
6 653 6 635	6 653 6 635

e) 1 011 and 1 011

1 011 1 011	1 011 1 011

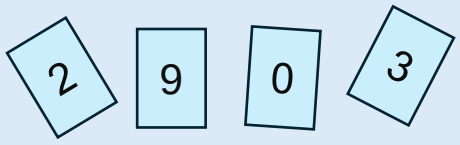
2. Use each digit once to make the smallest 4-digit number and the biggest 4-digit number.

a)



Smallest number:		
Biggest number:		

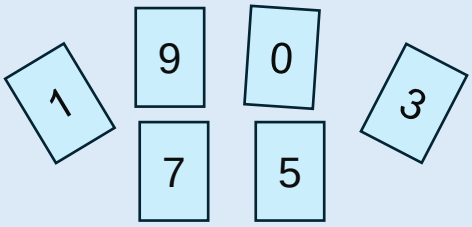
b)



Smallest number: ☐ ☐

Biggest number: ☐ ☐

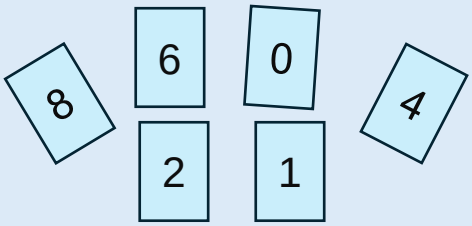
c)



Smallest number: ☐ ☐

Biggest number: ☐ ☐

d)



Smallest number: ☐ ☐

Biggest number: ☐ ☐

Signature:		**Date:**	

1.17. Even and odd numbers

Date		Classwork		Homework	

1. Count in twos from 2 462 up to 2 476 and write down the numbers while you count.

2 462							

2 462							

2. Write down the numbers between 2 462 and 2 476 that you left out (didn't use) when you counted in question 1.

The numbers you wrote in 1 when you did question 1 are ***even numbers.*** Even numbers are numbers that are divisible by 2 without a remainder. The numbers you left out when you did question 2 are ***odd numbers***. Odd numbers are numbers that are **1** less or 1 more than the even number

3. The first ten even numbers are given below. Complete the table by writing down the next ten even numbers.

0	2	4	6	8	10	12	14	16	18

0	2	4	6	8	10	12	14	16	18

4. Given the first ten even numbers in question 3, write down the first ten odd numbers.

Signature:		Date:	

1.18. More representing even and odd numbers

Date		Classwork		Homework	

1. Look at the even and odd numbers in boxes A and B:

2 462	2 464	2 466	2 468	2 470
2 472	2 474	2 476	2 478	2 480
2 482	2 484	2 486	2 488	2 490

A

2 461	2 463	2 465	2 467	2 479
2 471	2 473	2 475	2 477	2 489
2 481	2 483	2 485	2 487	2 499

B

a) Which block has even numbers?

b) Which block has odd numbers?

c) What are the last digits in all the even numbers?

d) What are the last digits in all the odd numbers?

2. Colour all even numbers and odd numbers. **N.B.** Use the same colour to colour even numbers and use another colour for odd numbers.

4 670 **9 811** **5 000** **3 215** **7 202**

4 679 **8 014** **5 023** **1 396**

2 017 **6 238** **1 203** **8 422** **4 675**

a) How do you know that the numbers you have coloured are even and not odd?

b) How do you know that the numbers you have coloured are odd and not even?

c) Is it true that when you add any two odd numbers the answer is always an even number? Give an example.

d) Is it true that when you add any two even numbers the answer is always an even number? Give an example.

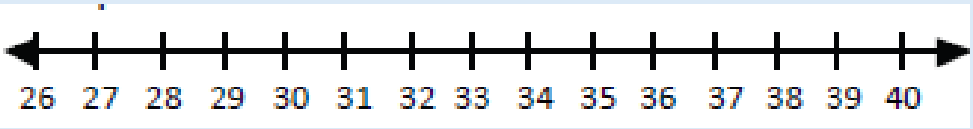
e) Is it true that when you add one even number and one odd number the answer is always an odd number? Give an example.

Signature:		**Date:**	

1.19. Rounding off numbers

Date		Classwork		Homework	

1. Look at the number line and answer the questions that follow:



a) Which number is halfway between 30 and 40?

b) Will you round off 35 to 30 or 40?
Explain your answer.

c) Is 33 closer to 30 or 40?

d) Which other numbers between 30 and 40 are closer to 30?

e) Will you round off the numbers in (c) and (d) to 30 or 40?

Explain your answer.

f) Is 37 closer to 30 or 40?

g) Which other numbers between 30 and 40 are closer to 40?

h) Will you round off the numbers in (f) and (g) to 30 or 40?

Explain your answer.

2. Complete the table.

Number	To which ten is it closer to, 30 or 40?
31	
32	
33	
34	
35	
36	
37	
38	
39	

To which ten is it closer to, 30 or 40?

Signature:		Date:	

1.20. Rounding off to the nearest 10

Date		Classwork		Homework	

1. Count in intervals given.

a) Count in 10s from 10 to 100.

10									100

10									100

b) Count in 10s from 11 to 101.

11									101

11									101

c) Count in 10s from 200 to 300.

200										300

200										300

d) Count in 10s from 201 to 301.

201										301

201										301

e) Count in 10s from 4 000 to 4 100.

4 000										4 100

4 000										4 100

f) Count in 10s from 4 001 to 4 101.

4 001										4 101

4 001										4 101

2. Look at (a), (c) and (e) in 1.

a) What do you notice about the last digit in all the multiples of 10?

We call numbers in (a), (c) and (e) multiples of 10. 30 and 70 are multiples of 10, but 30 and 40, 270 and 280, 4 020 and 4 030 are **consecutive multiples** of 10

b) In own words what are consecutive multiples of 10?

c) In (a) what are the two consecutive multiples of 10 other that 30 and 40? Write any 6.

Signature:		**Date:**	

1.21. More on rounding off numbers

Date		Classwork		Homework	

Look at how the different symbols are used.

When we want to write 4 + 5 is equal to 9, we use the symbol = . Thus, 4 + 5 = 9. [= stands for **is equal to…**]

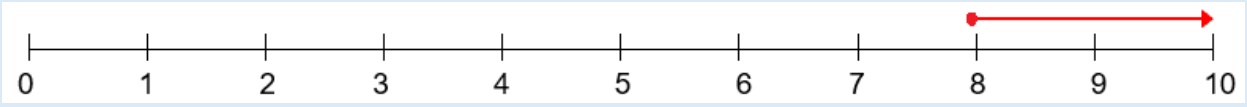
When we want to write 8 rounded off to the nearest 10, we use the symbol ≈ . Thus, 8 ≈ 10. [≈ stands for **approximately equal to…**]

1. Use the number line to round off the following to the nearest 10. Use the correct symbol.

When rounding off a number to the nearest 10, first identify between which multiples of 10 does the number lie, and then round off

Example

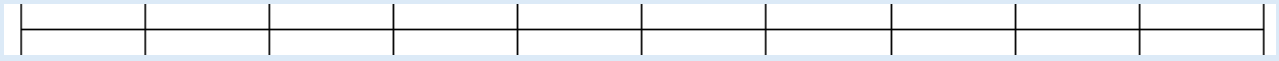
8 ≈ 10



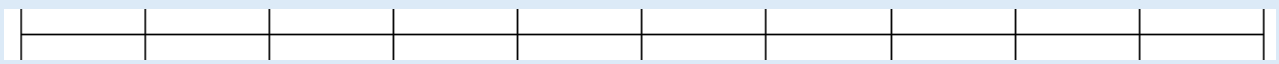
a) 63

b) 86

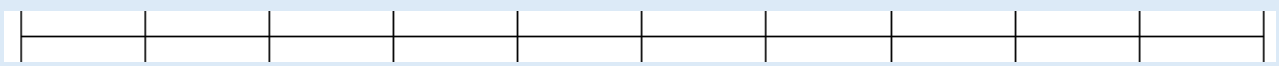
c) 143



d) 298



e) 8 058



Signature:		Date:	

1.22. More on rounding off numbers.

Date		Classwork		Homework	

1. Complete the table using the correct symbol.

Number	Between which two tens does the number lie?	Rounded off to the nearest 10	Between which two tens does the number lie?	Rounded off to the nearest 10
751				
752				
754				
755				
756				
757				
758				
759				

- When **rounding off** to the nearest **10**, if the ones digit is less than 5, **the tens digit does not change**, and the ones digit is replaced by a 0.
- When rounding off to the nearest 10, if the ones digit is 5 and more, the **tens digit changes to the next ten**, and the ones digit is replaced by a 0.
- When rounding off to the nearest 10, if the ones digit is 5 and more and the **tens digit is 9**, the **hundreds digit** changes to the next hundred.
- **NOTE**: Both the ones digit and tens digit are replaced by a 0 each.

2. Round off the following numbers to the nearest 10

Number	Between which two tens does the number lie?	Rounded off to the nearest 10	Between which two tens does the number lie?	Rounded off to the nearest 10
2 872				
5 078				
8 892				
2 198				
4 599				
8 675				

3. What do you think 8 998 would be when rounded off to the nearest 10?

Signature:		Date:	

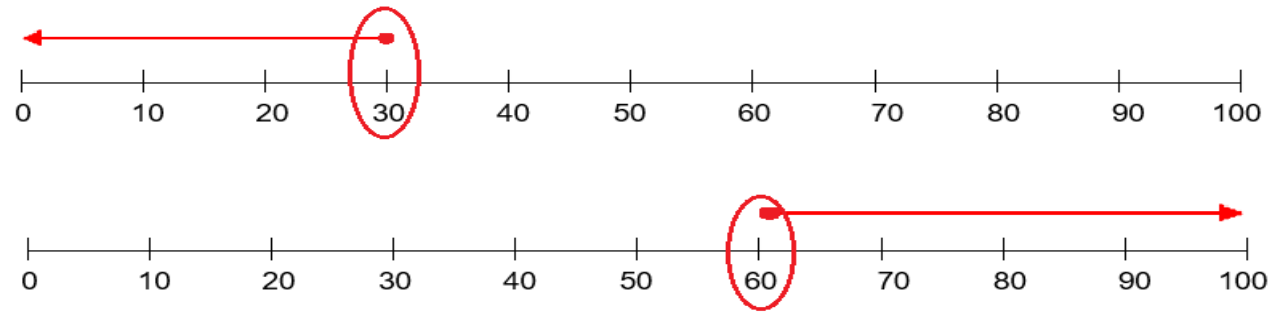
1.23. Rounding off to the nearest 100

Date		Classwork		Homework	

Example

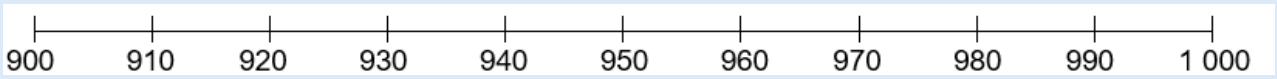
30 rounded off to the nearest 100 is 0: 30 ≈ 0

60 rounded off to the nearest 100 is 100: 60 ≈ 100

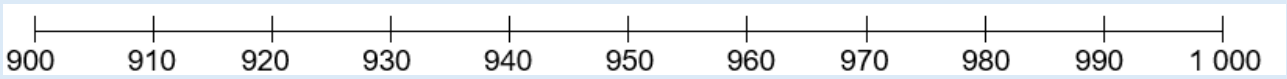


1. Round off the following to the nearest 100 using the number line

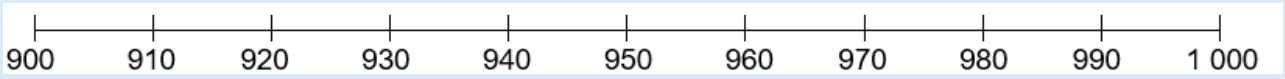
a) 949



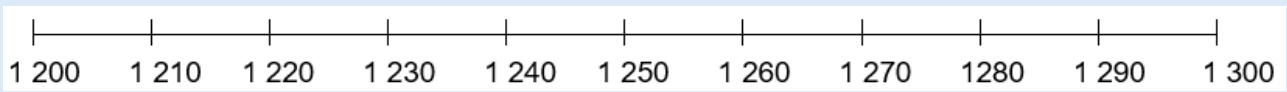
b) 950



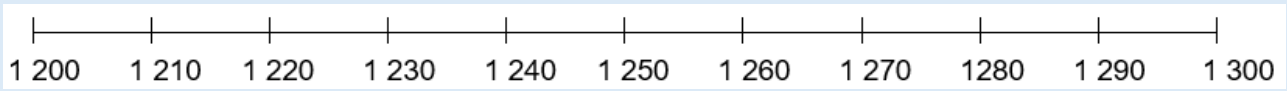
c) 953



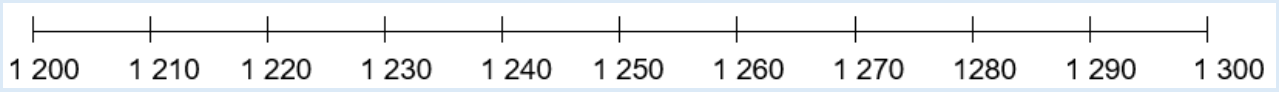
d) 1 228



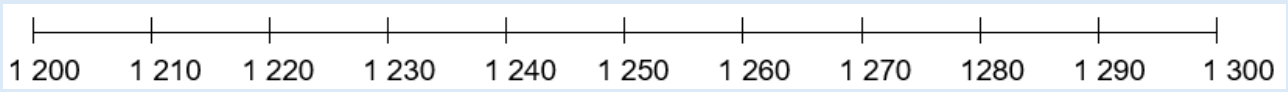
e) 1 260



f) 1 262



g) 1 299



2. Round off the following numbers to the nearest 100.

Number	Between which two hundreds does the number lie?	Rounded off to the nearest 100	Between which two hundreds does the number lie?	Rounded off to the nearest 100
272				
578				
1 392				
1 098				
8 562				
3 599				
8 675				

3. What do you think 9 998 would be when rounded off to the nearest 100?

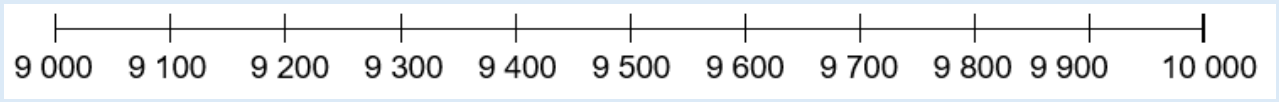
Signature:		Date:	

1.24. Round off to the nearest 1 000

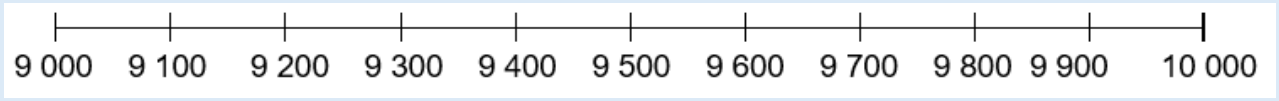
Date		Classwork		Homework	

1. Use the number lines to round off to the nearest 1 000.

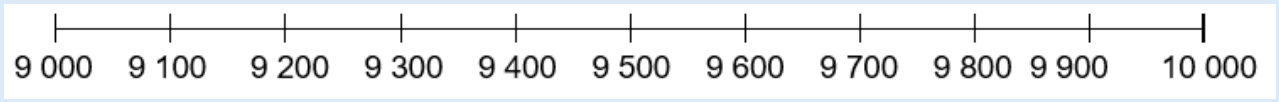
a) 9 149



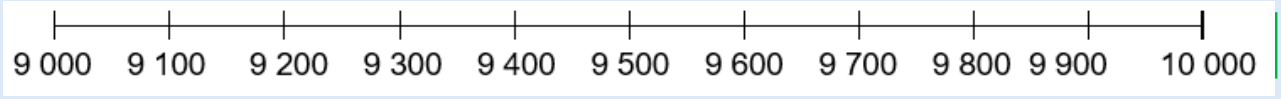
b) 9 150



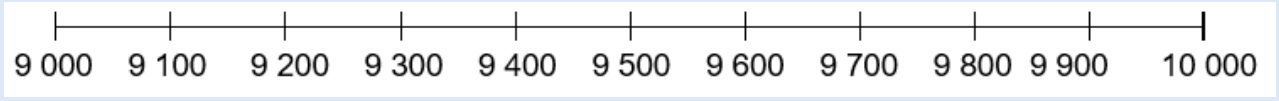
c) 9 353



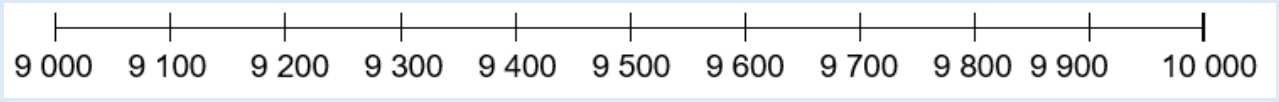
d) 9 428



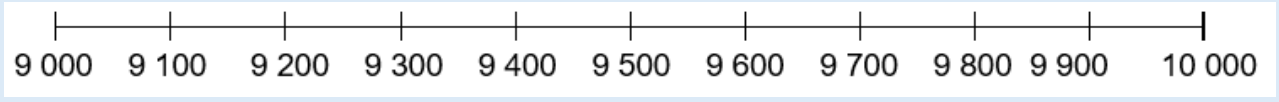
e) 9 500



f) 9 568



g) 9 899



2. Round off the following numbers to the nearest 1 000.

Number	Between which two thousands does the number lie?	Rounded off to the nearest 1 000	Between which two thousands does the number lie?	Rounded off to the nearest 1 000
1 272				
3 578				
6 392				
5 098				
8 562				
3 599				
8 675				

3. What do you think 9 998 would be when rounded off to the nearest 1 000?

Signature:		**Date:**	

UNIT 2: NUMBER SENTENCES

2.1. Number sentences to at least 10 and 100, with their multiples

Date		Classwork		Homework	

Number sentences to at least 10 and its multiples

a)	3	+	7	=				3	+	7	=	
b)	10	–		=	6			10	–		=	6
c)	3	+	17	=				3	+	17	=	
d)	20	–	6	=				20	–	6	=	
e)	50	–		=	20			50	–		=	20

Number sentences to at least 100 and its multiples

a)	30	+	70	=				30	+	70	=	
b)	100	–		=	60			100	–		=	60
c)	30	+	170	=				30	+	170	=	
d)	200	–		=	60			200	–		=	60
e)	500	–		=	300			500	–		=	300

Number sentences to at least 1 000 and its multiples

a)	300	+	700	=				300	+	700	=	
b)	1000	–		=	600			1000	–		=	600
c)	300	+	1 700	=				300	+	1 700	=	
d)	2 000	–		=	600			2 000	–		=	600
e)	5 000	–		=	3 000			5 000	–		=	3 000

Signature:		Date:	

2.2. Addition and subtraction as inverse operations

Date		Classwork		Homework	

a)	33 + 67	=		**Therefore** 100 –		=	33	**Or** 100 –		= 67
	33 + 67	=		**Therefore** 100 –		=	33	**Or** 100 –		= 67
b)	33 + 38	=		**Therefore** 71 –		=	38	**Or** 71 –		= 33
	33 + 38	=		**Therefore** 71 –		=	38	**Or** 71 –		= 33
c)	18 – 8	=		**Therefore** 10 +		=	18	**Or** 8 +		= 18
	18 – 8	=		**Therefore** 10 +		=	18	**Or** 8 +		= 18
d)	50 – 28	=		**Therefore** 22 +		=	50	**Or** 28 +		= 50
	50 – 28	=		**Therefore** 22 +		=	50	**Or** 28 +		= 50

Signature:		Date:	

2.3. Additive property of zero

Date		Classwork		Homework	

a)	120	+		=	120		120	+		=	120
b)		+	0	=	36			+	0	=	36
c)	54	–		=	0		54	–		=	0
d)		–	0	=	150			–	0	=	150
e)	38	+	3	–	3	=			38	+	3	–	3	=	
f)	54	–	5	+	5	=			54	–	5	+	5	=	
g)	21	+	7	–		=	21		21	+	7	–		=	21

Signature:		Date:	

2.4. Commutative property

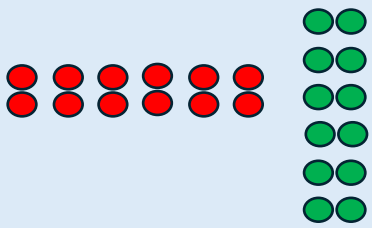
Date		Classwork		Homework	

1. Complete the following e.g. 7 + 1 = 1 + 7 and 70 + 10 = 10 + 70

When you add 7 to 1 you get the same answer as when you add 1 to 7. We can write this number sentence as 7 + 1 = 1 + 7. When you two or more numbers, the order does not count.

a)	3	+	2	=	2	+		3	+	2	=	2	+	
b)	20	+		=	30	+	20	20	+		=	30	+	20
c)	8	+	4	=	4	+		8	+	4	=	4	+	
d)	80	+	40	=		+	80	80	+	40	=		+	80
e)		+	20	=		+	40		+	20	=		+	40

When you multiply 2 by 6 you get the same answer as when you multiply 6 by 2. We can write this number sentence in symbols: 2 × 6 = 6 × 2. When you multiply two or more numbers, the order does not count.



2. Write the following in a different way such that the number sentence is true.

a)	1 × 7 =	1 × 7 =
b)	9 × 3 =	9 × 3 =
c)	8 × 5 =	8 × 5 =
d)	4 × 8 =	4 × 8 =

3. Say whether you get the same answer when you work on each side of the equal sign. If you get the same answer, write True and if you do not get the same answer, write False

a)	5 + 3 + 6 = 6 + 5 + 3		
b)	4 × 6 = 6 × 4		
c)	10 ÷ 5 = 5 ÷ 10		
d)	15 − 10 = 10 − 15		

Signature:		Date:	

2.5. Associative property

Date		Classwork		Homework	

When adding or multiplying two or more numbers, the result remains the same regardless of how they are grouped. e.g. $2 + (3 + 5) = (2 + 3) + 5$ and $(2 \times 3) \times 5 = 2 \times (3 \times 5)$

1. Complete the following:

a)	$7 + (1 + 4) = (7 + 1) + 4$ $7 +$ _____ $= 8 + 4$ $12 =$ _____	$7 + (1 + 4) = (7 + 1) + 4$ $7 +$ _____ $= 8 + 4$ $12 =$ _____
b)	$(8 + 1) + 4 = 8 + ($ _____ $+ 4)$ $9 + 4 = 8 +$ _____ _____ $= 13$	$(8 + 1) + 4 = 8 + ($ _____ $+ 4)$ $9 + 4 = 8 +$ _____ _____ $= 13$
c)	$2 + (6 + 4) = ($ _____ $+ 6) + 4$ $2 + 10 =$ _____ $+ 4$ _____ $=$ _____	$2 + (6 + 4) = ($ _____ $+ 6) + 4$ $2 + 10 =$ _____ $+ 4$ _____ $=$ _____
d)	$3 \times (5 \times 2) = (3 \times 5) \times 2$ _____ $\times 10 =$ _____ $\times 2$ $30 = 30$	$3 \times (5 \times 2) = (3 \times 5) \times 2$ _____ $\times 10 =$ _____ $\times 2$ $30 = 30$
e)	$4 \times (3 \times 3) = (4 \times 3) \times 3$ _____ $\times 9 = 12 \times 3$ $36 = 36$	$4 \times (3 \times 3) = (4 \times 3) \times 3$ _____ $\times 9 = 12 \times 3$ $36 = 36$
f)	$6 \times (3 \times 2) = (6 \times 3) \times 2$ _____ $\times 6 =$ _____ $\times 2$ _____ $= 36$	$6 \times (3 \times 2) = (6 \times 3) \times 2$ _____ $\times 6 =$ _____ $\times 2$ _____ $= 36$

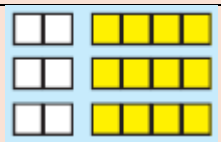
Signature:		Date:	

2.6. Distributive properties:

Date		Classwork		Homework	

$3 \times (2 + 4) = 18$

This can be calculated in different ways as shown below:

$3 \times (2 + 4) = 18$	$(3 \times 2) + (3 \times 4) = 18$
	
$3 \times (2 + 4)$ $= 3 \times 6$ $= 18$	$3 \times (2 + 4)$ $=(3 \times 2) + (3 \times 4)$ $= 18$

Therefore $3 \times (2 + 4)$ is the same as $(3 \times 2) + (3 \times 4)$.

1. Complete the following number sentences using the above example.

a) $4 \times (4 + 5) =$

b) $3 \times (6 + 3) =$

c) $(10 + 4) \times 7 =$

d) $(0 + 9) \times 11 =$

e) $20 \times (16 + 10) =$

Signature:		Date:	

2.7. Writing a number sentence to describe a problem situation

Date		Classwork		Homework	

1. Write a number sentence for each problem.

a) Out of the 524 children in a school, 217 are boys. How many girls are there in the school?

b) A farmer harvested 1 360 pumpkins in one year. In the second year he harvested 1 338 pumpkins. In total, he harvested 2 698 pumpkins.

c) Emma paid R 8 760 for six microwaves. What is the price of one microwave of the same kind?

d) A wheel of a certain machine makes 7 turns per minute. In 20 minutes, it will make 140 turns.

e) There are 3 rows of spinach that gave 15 bunches when harvested. How many bunches of spinach of the same size were harvested in each row?

2. Create a word problem for each of the following number sentences.

a) 115 – 80 = 35

b) 45 ÷ 15 = ☐

c) 300 + ☐ = 1 200

d) 56 × 15 = 840

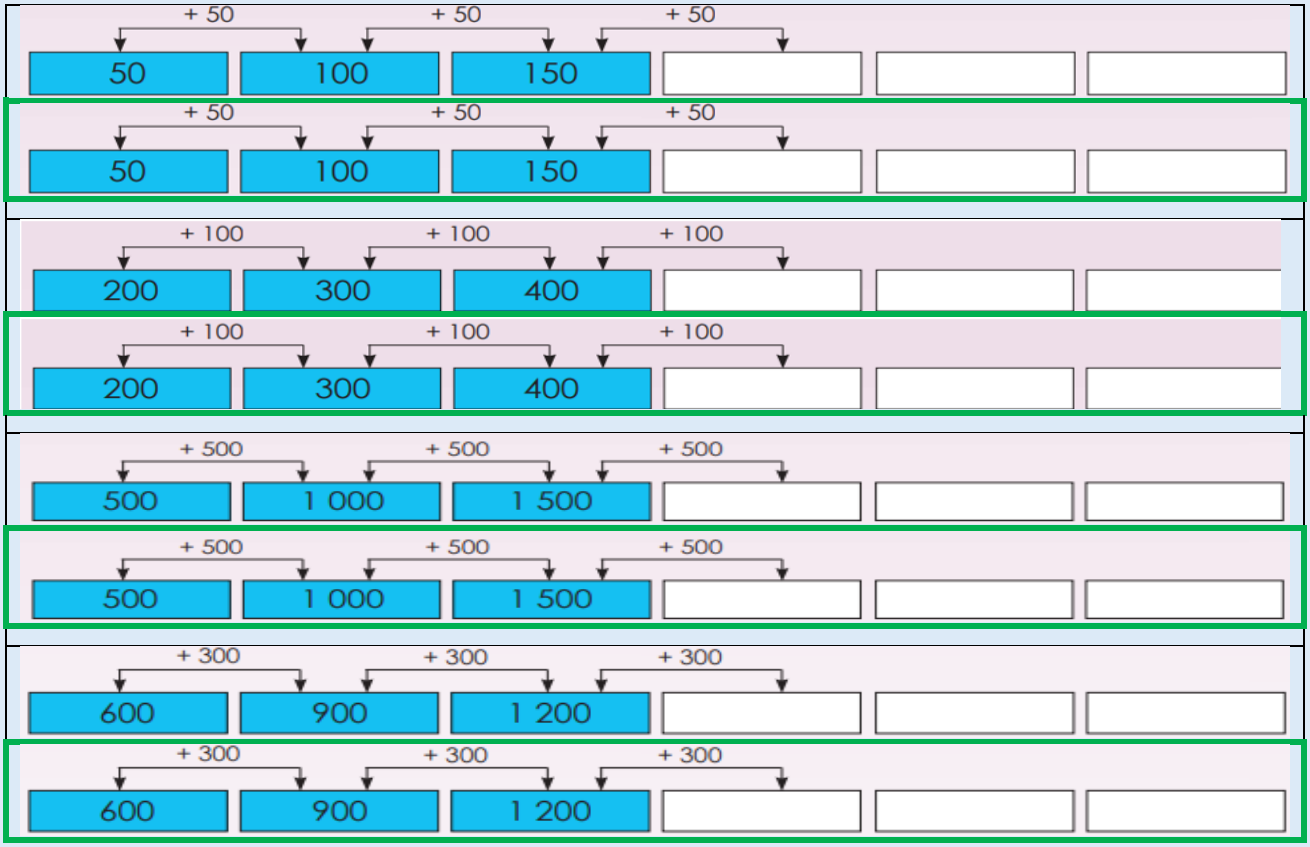
Signature:		Date:	

UNIT 3: WHOLE NUMBERS: ADDITION AND SUBTRACTION

3.1. Patterns in addition

Date		Classwork		Homework	

1. Complete the pattern:



2. Complete the table using the example given.

		Complete to the next 10	Complete to the next 100	Complete to the next 1 000
a)	475	475 + 5 = 480	475 + 25 = 500	475 + 525 = 1 000
b)	976			
c)	1 253			
d)	1 575			

		Complete to the next 10	Complete to the next 100	Complete to the next 1 000
a)	475	475 + 5 = 480	475 + 25 = 500	475 + 525 = 1 000
b)	976			
c)	1 253			
d)	1 575			

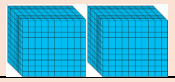
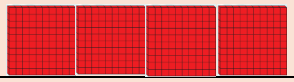
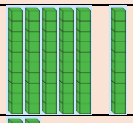
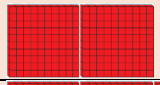
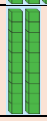
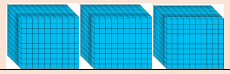
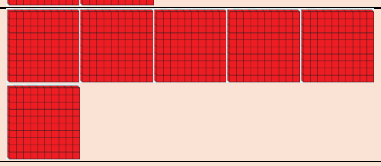
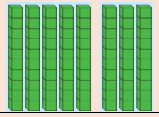
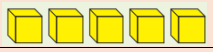
Signature:		Date:	

3.2. Addition using base 10 blocks

Date		Classwork		Homework	

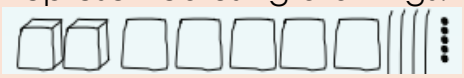
Example: Calculate 2 463 + 1 232 using base 10 blocks.

Show 2 463 and 1 232 on a place value table using base 10 blocks

	THOUSANDS	HUNDREDS	TENS	ONES
2 463				
1 222				
3 685				

∴ 2 463 + 1 232 = 3 685

NOTE: Numbers can be represented using drawings:

2 545 is represented as 

1. Calculate. Show your working as drawings.

a) 241 + 3 426

b) 5 489 + 7 842

Signature:		Date:	

3.3. Break down and build up numbers

Date		Classwork		Homework	

Another method to add multiples of 10 is to break numbers down into hundreds and tens, for example:

260 + 90 = (200 + 60) + 90
= 200 + 150
= 350

OR

260 + 90 = (250 + 10) + 90
= 250 + 100
= 350

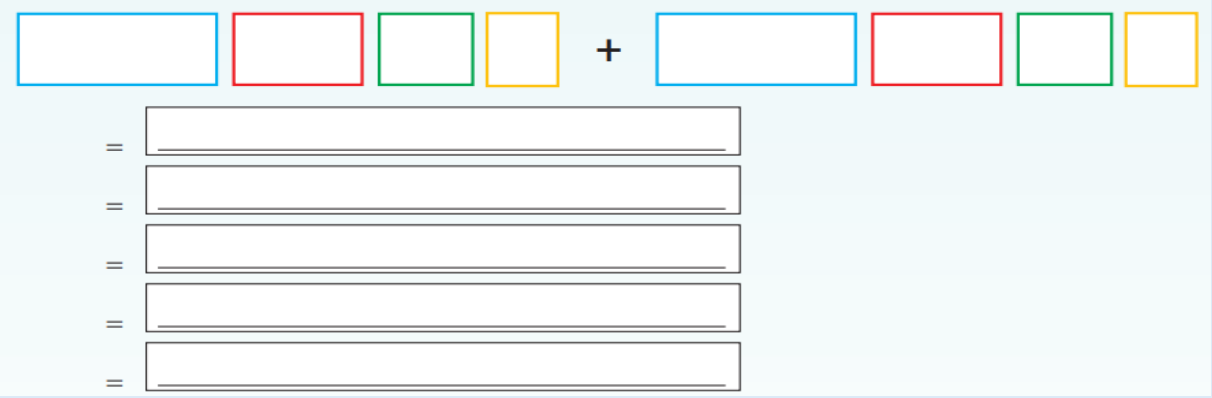
You need not write down all the steps when you work like this.

1. Calculate:

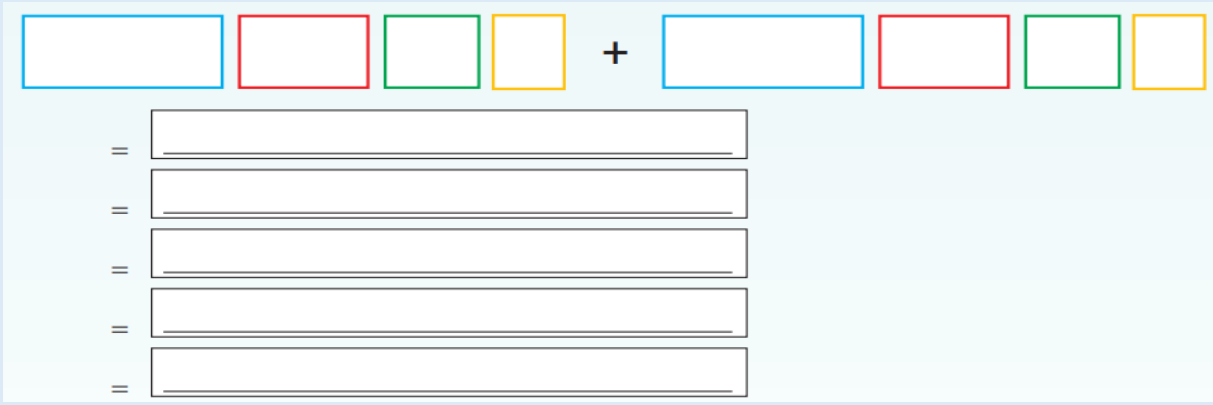
a) 360 + 370 =

b) 3 210 + 2 520 =

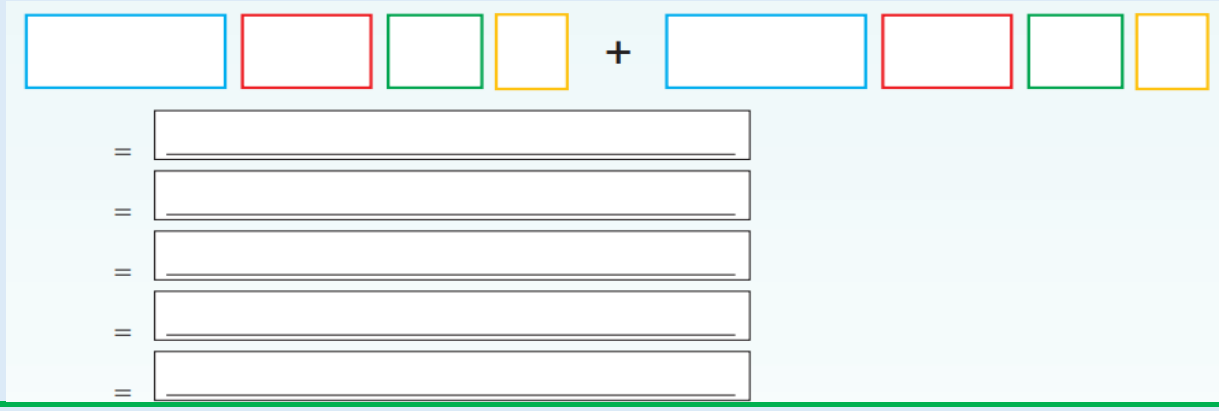
3 210 + 2 520 =



c) 1 390 + 1 350

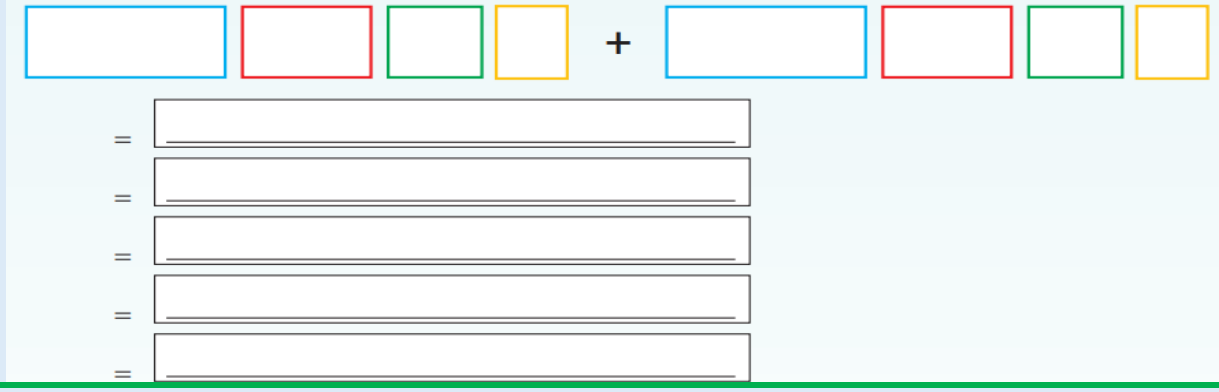


1 390 + 1 350



d) 2 200 + 2 850

2 200 + 2 850



Signature:		Date:	

3.4. Break down and build up numbers continued

Date		Classwork		Homework	

To add numbers, it helps to **break them down into place value parts first**. The thousands can be added to thousands, hundreds can be added to the hundreds, the tens to the tens and the ones to the ones. It is helpful to break the number to be added.

Example:

160 + 180 = =160 + (100 +80) = 260 + 80 = 340	2 350 + 2 390 = =2 350 + (2 000 + 300 + 90) =4 350 + (300 + 90) = 4 650 = 4 740

1. Calculate by breaking down the number to be added.

a) 387 + 288

b) 3 265 + 1 312

c) 5 676 + 3 961

d) 3 593 + 2 378

e) 5 369 + 2 965

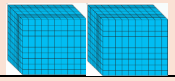
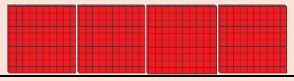
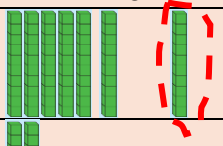
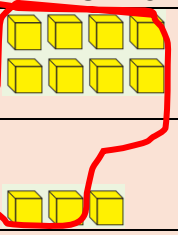
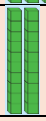
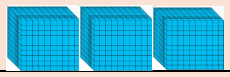
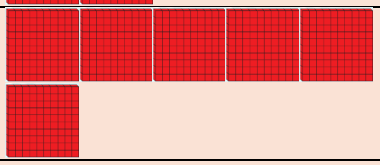
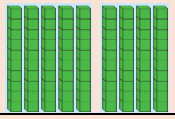
Signature:		**Date:**	

3.5. Addition using column method

Date		Classwork		Homework	

Example: Calculate 2 468 + 1 223 using column method.

2 468 and 1 223 can be shown on a place value table using base 10 blocks

	THOUSANDS	HUNDREDS	TENS	ONES
2 468				
1 223				
3 691				

∴ 2 468 + 1 223 = 3 691

Th	H	T	O
2	4	6 +1	8
1	2	2	3
3	6	9	1

a) 387 + 288

Th	H	T	O

Th	H	T	O

b) 3 265 + 1 312

Th	H	T	O

Th	H	T	O

c) 5 676 + 3 961

Th	H	T	O

Th	H	T	O

d) 3 593 + 2 378

Th	H	T	O

Th	H	T	O

e) 5 369 + 2 965

Th	H	T	O

Th	H	T	O

f) 4 289 + 2 432

Th	H	T	O

Th	H	T	O

Signature:		Date:	

3.6. Addition using breaking down method to form doubles

You can also break down the other number such that one part of the number that is broken down is the same as the other number. Then use associative property to calculate. **Note:** Two numbers that are the same are called doubles.

160 + 180 =  160 + 180 = 160 + (160 + 20) = (160 + 160) + 20 = 320 + 20 = 340	2 350 + 2 390 =  2 350 + 2 390 = 2 350 + (2 350+ 40) = (2 350 + 2 350) + 40 = 4 700 + 40 = 4 740

1. Break down the number to form doubles and calculate:

a) 360 + 370 =	
b) 3 210 + 2 520 =	
c) 1 390 + 1 350 =	
d) 2 200 + 2 850 =	

Signature:		**Date:**	

3.7. Round-off and compensate

Date		Classwork		Homework	

It is often useful to quickly make approximate answers for calculations. Imagine you buy items for R34 and R58 and do not have time to accurately calculate R34 + R58. It can help you to know that you need to pay about R30 + R60, which is about R90. Rounding off can be used to **estimate** the answers for calculations.

1. Round-off these numbers to the multiples of 10, 100 or 1 000 and compensate to calculate:

   Examples:

a) 143 + 152
= (143 – 3) + (152 + 3)
= 140 + 155
= 295

b) 1 166 + 1 232
= (1 166 + 32) + (1 232 – 32)
= 1 198 + 1 200
= 2 398

a)	176 + 434	176 + 434

b)	3 267 + 5 466	3 267 + 5 466

c)	2 343 + 5 549	2 343 + 5 549

Signature:		Date:	

3.8. Addition: filling up tens, hundreds and thousands

Date		Classwork		Homework	

Revise the difference between rounding off and filling up the tens.

Round off the following to the:	**Fill up the following:**
Nearest ten	**Tens**
14 ≈ 10	14 + 6 = 20
123 ≈ 120	123 + 7 =130
Nearest hundred	**Hundreds**
130 ≈ 100	130 + 70 = 200
564 ≈ 600	564 + 36 = 600
Nearest thousand	**Thousands**
1 257 ≈ 1 000	1 257 + 743 = 2 000
5 616 ≈ 6 000	5 616 + 384 = 4 000

1. Fill up the tens, hundreds and thousands

		Fill up the tens	Fill up the hundreds	Fill up the thousands
a)	3 524			
b)	5 132			
c)	1 213			
d)	8 458			
e)	4 199			

		Fill up the tens	Fill up the hundreds	Fill up the thousands
a)	3 524			
b)	5 132			
c)	1 213			
d)	8 458			
e)	4 199			

Signature:		Date:	

3.9. Addition: filling up tens, hundreds and thousands, continued

Date		Classwork		Homework	

Calculate the following by filling up tens, hundreds or thousands

Example

160 + 180 = 160 + 180 = (160 + 40) + (180 − 40) = 200 + 140 = 340	2 350 + 2 390 = 2 350 + 2 390 = (2 350 + 50)+(2 390− 50) =2 400 + 2 340 = 4 740

a) 360 + 370 =

b) 3 210 + 2 520 =

c) 1 390 + 1 350 =

d) 2 200 + 2 850 =

Signature:		Date:	

3.10. Solving problems in context

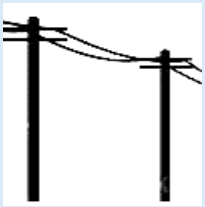
Date		Classwork		Homework	

1. Solve the following problems:

a) A farmer had 1 975 oranges. He harvested another 1 055 oranges. How many oranges does he have altogether?

- What operation sign should you use?
- Write a number sentence and solve the problem.

b) One pole is 2 050 mm long and the second pole is 1 235 mm longer than it. How long is the second pole?



c) Lindi walked 1 265 m on the first day. On the second day she was a bit tired and walked 650 m? How far did she walk in two days?

Signature:		Date:	

3.11. Solving problems in context.

Date		Classwork		Homework	

a) My mother used 1 750 grams of flour for all the cupcakes she baked. My sister used 2 000 grams of flour for all the muffins she made. How much flour did they use together?

b) An airline charges a fare of R4 480 for a return flight from Johannesburg to Nairobi. There are also additional fees and taxes of R3 448. What is the total cost of the air ticket?

c) Selina uses 3 520 litres of water from the tank to water her small field of maize. If there is 4 850 litres water left, how much water was in the tank?

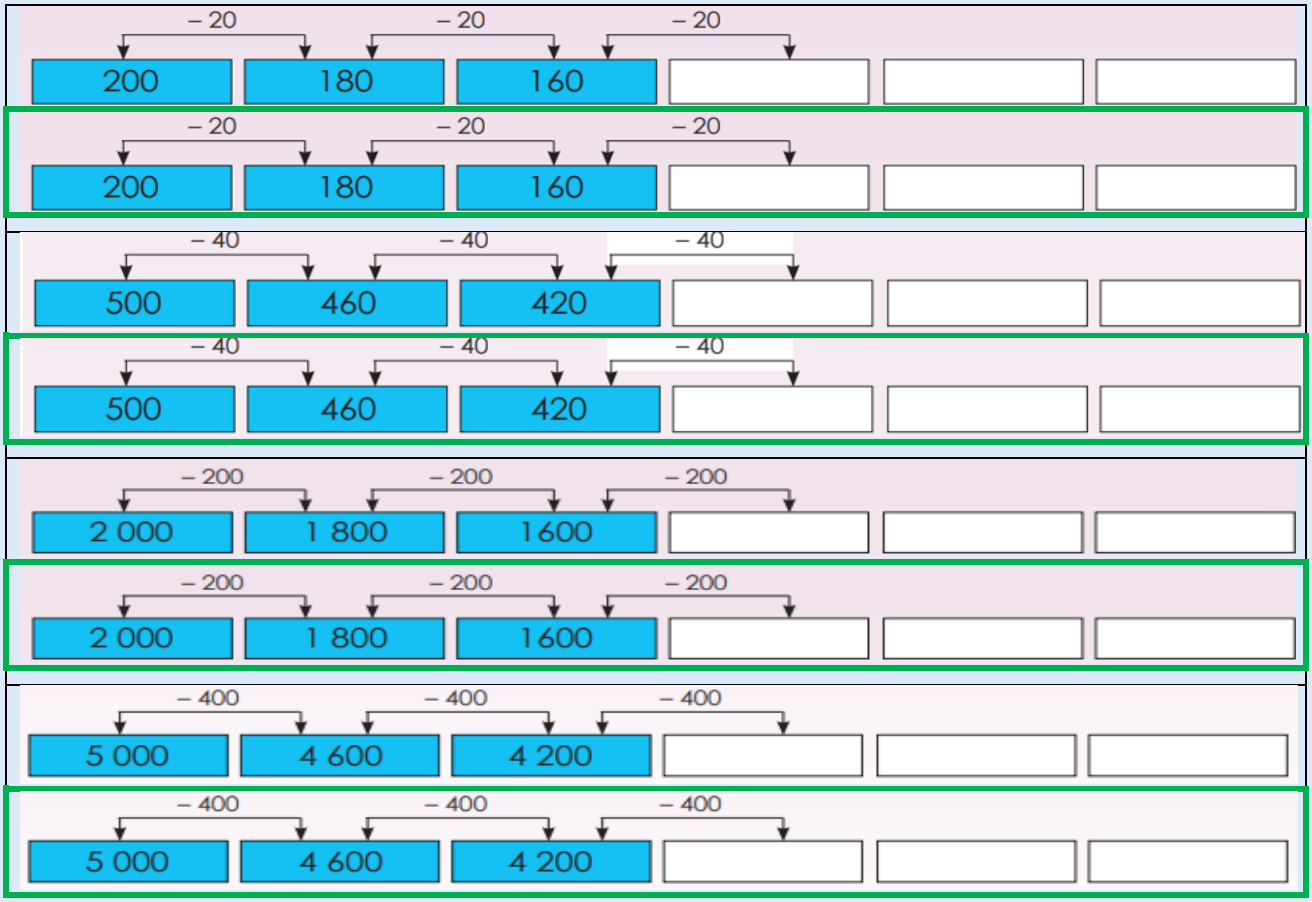
d) My father bought a television set for R4 550. My mother bought a television stand for R3 250. How much did they pay altogether?

Signature:		Date:	

3.12. Patterns in subtraction

Date		Classwork		Homework	

1. Complete the pattern:



2. Complete the table.

		Complete to the previous 10	Complete to the previous 100	Complete to the previous 1 000
a).	475	475 – 5 = 470	475 – 75 = 400	475 – 475 = 0
b).	976			
c).	1 253			
d).	1 575			

		Complete to the previous 10	Complete to the previous 100	Complete to the previous 1 000
a).	475	475 – 5 = 470	475 – 75 = 400	475 – 475 = 0
b).	976			
c).	1 253			
d).	1 575			

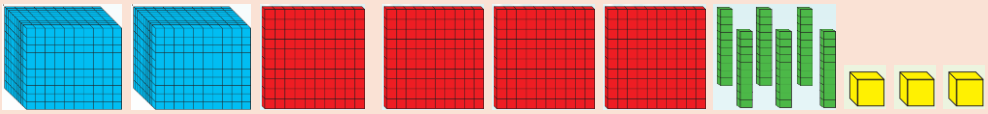
Signature:		Date:	

3.13. Subtraction using base 10 blocks

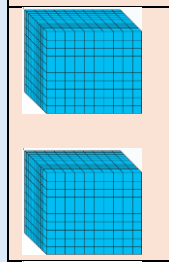
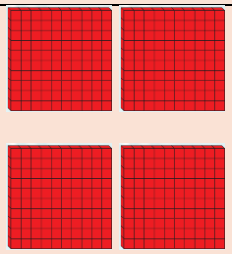
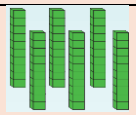
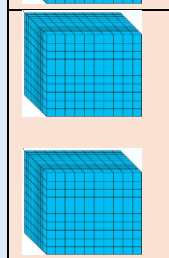
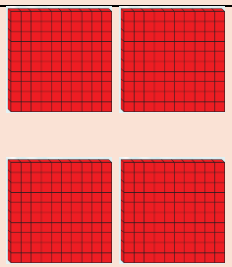
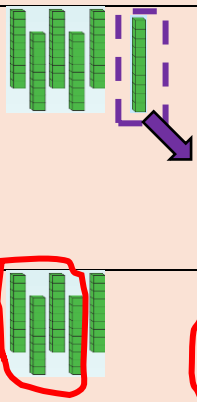
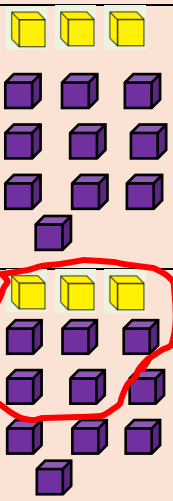
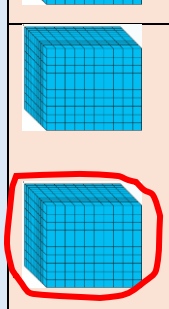
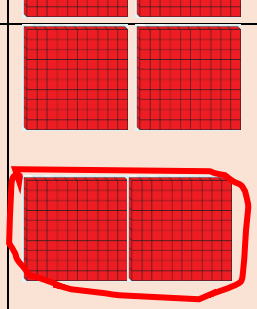
Date		Classwork		Homework	

1. Calculate 2 463 – 1 248 using base 10 blocks.

Show 2 463 with your base 10 blocks.

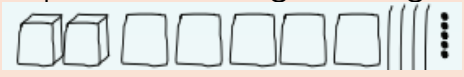


If there are enough ones, you can take them away. If not, take one from the next unit and write it as ones.

Th	H	T	O	
				**Row 1**: Show 2 463 on a place value table using base 10 blocks **Row 2**: When subtracting, start with the ones and check if there are enough to take away from. If not, take one from the next unit and represent it as ones. Move on to the next unit to check if there are enough units to take away from, if not take the one from the next unit and represent it as the unit you want to subtract. **Row 3:** Subtract (take away) each place value part from the corresponding one. Continue with the process until you are done with all the place value parts: **Row 4:** Write what is left in numbers 2 463 – 1 248
				
				
1	**2**	**1**	**5**	

∴ 2 463 – 1 248 = 1 215

NOTE: Numbers can be represented using drawings:

2 545 is represented as 

2. Calculate. Show your working as drawings.

a) 5 463 – 2 342

b) 3 241 – 3 426

c) 9 489 – 4 842

d) 7 542 – 3 426

Signature:		**Date:**	

3.14. Break down and build up numbers

Date		Classwork		Homework	

Another way to subtract is to **break the numbers down** and **work with the place value parts**, then **build the answer up**.

Example:

3 720 – 1 450 = (3 000 + 700 + 20) – (1 000 + 400 + 50) = (3 000 – 1 000) + (600 − 400) + (120 − 50) = 1 000 + 200 + 70 = 1 270	**Step 1:** Expand both numbers **Step 2:** Subtract ones first and then move to other units. If the units to take away from are not enough, take one from the next unit and represent it as the unit you want to subtract. **Note.** Subtract hundreds from hundreds & tens from tens

Calculate:

a) 4 780 – 1 520

b) 6 567 – 4 143

c) 5 760 – 5 280

d) 7 542 – 3 426

e) 7 004 – 3 426

Signature:		Date:	

3.15. Break down the number to be subtracted

Date		Classwork		Homework	

To subtract numbers, it helps to **break them down into place value parts first**. The thousands can be subtracted from thousands, hundreds can be subtracted from the hundreds, the tens from the tens and the ones from the ones. It is helpful to break the number to be subtracted.

180 – 120 = =180 – (100 +20) = 80 – 20 = 60	2 450 – 2 390 = =2 450 – (2 000 + 300 + 90) = 450 – (300 +90) = 150 – 90 = 60

1. Calculate by breaking down the number to be subtracted.

a) 389 – 288

b) 6 787 – 2 546

c) 5 676 – 3 961

d) 3 265 – 1 318

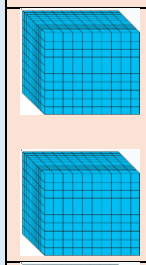
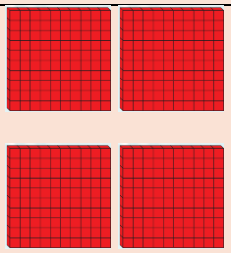
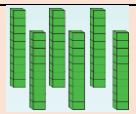
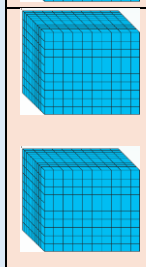
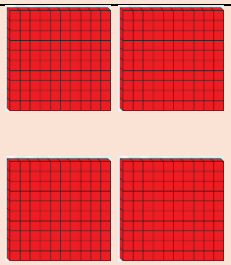
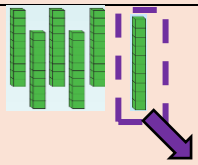
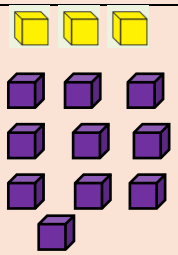
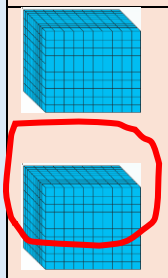
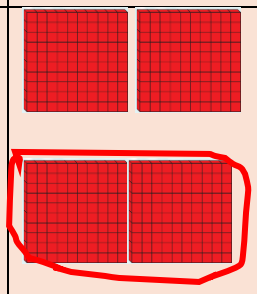
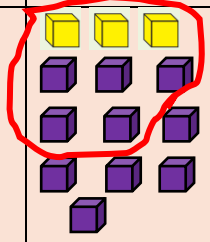
e) 7 345 – 2 563

Signature:		**Date:**	

3.16. Subtraction using column method

Date		Classwork		Homework	

Example: Calculate 2 463 – 1 248 using base 10 blocks.

Th	H	T	O	
				**Row 1**: Show 2 463 on a place value table using base 10 blocks **Row 2**: When subtracting, start with the ones and check if there are enough to take away from. If not, take one from the next unit and represent it as ones. Move on to the next unit to check if there are enough units to take away from, if not take the one from the next unit and represent it as the unit you want to subtract. **Row 3:** Subtract (take away) each place value part from the corresponding one. Continue with the process until you are done with all the place value parts: **Row 4:** Write what is left in numbers 2 463 – 1 248
				
				
1	**2**	**1**	**5**	

∴ 2 463 – 1 248 = 1 215

Th	H	T	O
			+10
2	4	~~6~~ 5	3
1	2	4	8
1	2	1	5

a) 387 – 288

Th	H	T	O

Th	H	T	O

b) 3 5657 – 1 312

Th	H	T	O

Th	H	T	O

c) 5 676 – 3 961

Th	H	T	O

Th	H	T	O

d) 5 369 – 2 965

Th	H	T	O

Th	H	T	O

Signature:		Date:	

3.17. Solving problems

Date		Classwork		Homework	

1. Willem must lay 8 680 bricks. He has already laid 2 357 bricks. How many bricks must he still lay?

2. A refrigerator costs R5 775 at a shop. The same model costs R5 999 at another shop. What is the difference between the two prices?

3. Between 10 o'clock and 11 o'clock 2 176 people entered a soccer stadium. How many people entered the stadium after 11 o'clock if the total number of people in the stadium was 6 573?

Signature:		Date:	

3.18. Solving problems

Date		Classwork		Homework	

1. Lerato jogged 5 683 m. In the same period, Sipho jogged 7 749 m. How much further than Lerato did Sipho jog?

2. A contractor must build 8 500 flush toilets in a township. He has completed 5 370. How many are still outstanding?

3. Tebogo also has R3 787 in her purse. She pays R2 545 for a microwave. How much money does she have left?

Signature:		Date:	

3.19. Addition and subtraction problems

Date		Classwork		Homework	

1. The water tank holds 5 400 litres. Our household used 2 590 litres in two weeks. How much water is left?

2. Ben has R4 325. He must pay R2 760 rent for his house. How much money will he have left?

3. The distance from the school gate to the office is 349 m. 276 m of this distance is tarred.

a) Estimate, how much of the road from the school gate to the office still needs to be tarred.

b) Calculate exactly how much of the road still needs to be tarred.

Signature:		Date:	

3.20. Addition and subtraction problems

Date		Classwork		Homework	

Farmer Cele has two farms. He calls them Farm A and Farm B. He has 2 347 goats in Farm A. Altogether, there are 5 479 goats in the two farms.

a) How many goats are there in Farm B?

b) Farmer Cele takes 1 234 goats from Farm A to Farm B. How many goats are left in Farm A?

c) How many goats are there on Farm B now?

Signature:		Date:	

3.21. Addition and subtraction problems

Date		Classwork		Homework	

Three stokvels groups collected these amounts of money: R3 696; R1 721 and R2 476.

a) How much money did they collect altogether?

b) What is the difference between the highest and the lowest amounts of money?

c) Write an appropriate and interesting word problem for: 3 439 and 2 514. Solve it.

Signature:		Date:	

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