

Arithmetic

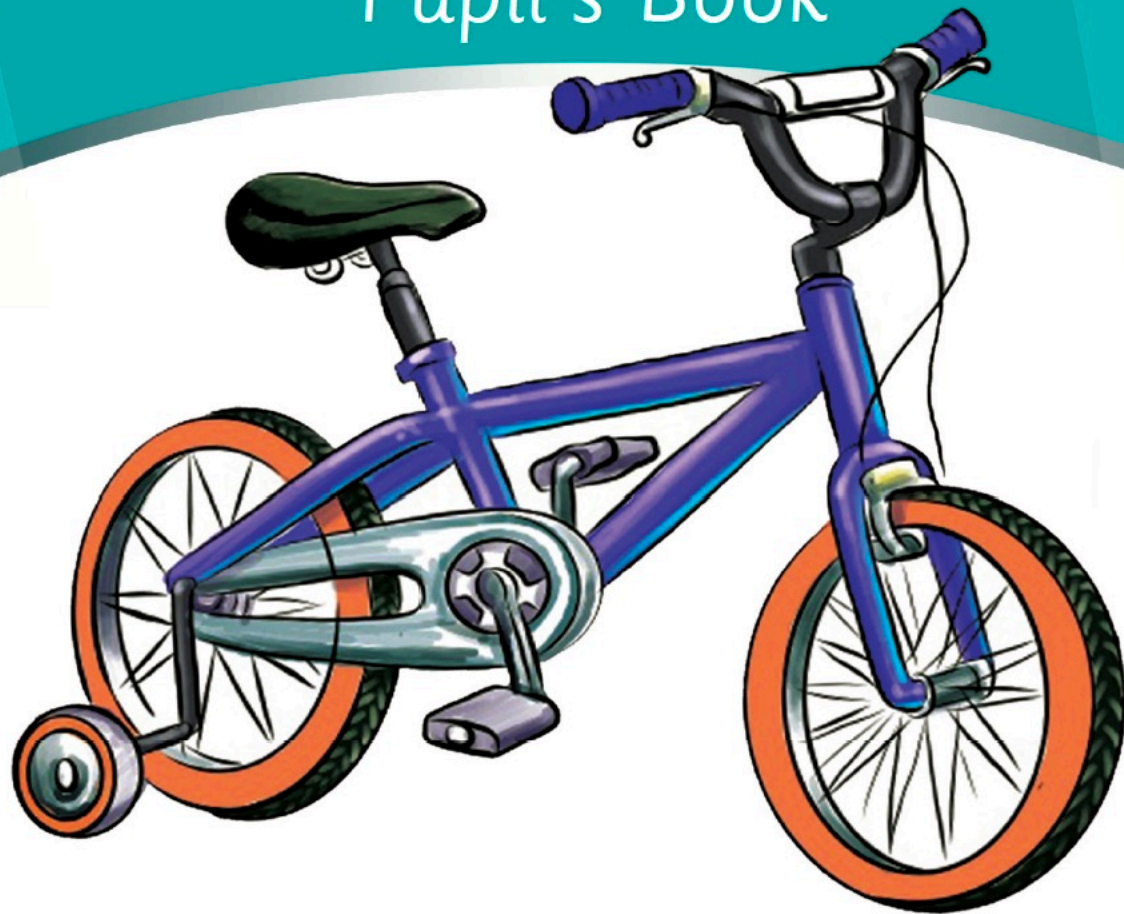
Standard One

Pupil's Book

Arithmetic

Standard One

Pupil's Book



1



2



3



Tanzania Institute of Education





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Arithmetic

Standard One

Pupil's Book

THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION,
SCIENCE AND TECHNOLOGY

Certificate of Approval

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Dr. Lyabwene M. Mtahabwa
Acting Commissioner for Education

Tanzania Institute of Education





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Dr Aneth A. Komba

Director General

Tanzania Institute of Education



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Introduction

This is the first book in a series of two books for Arithmetic in primary schools. The book has eighteen chapters which guide a pupil through learning counting, reading and writing numbers. Other chapters are on figures and ways to collect objects and list them. The pupil is advised to follow the examples given and attempt all exercises. Pupils are encouraged to help one another and seek help from teachers and parents.



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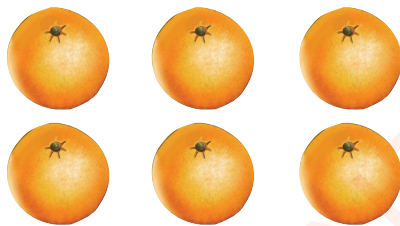
Chapter One

Comparing quantities

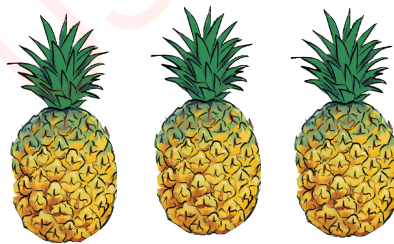
Identifying which things are more or fewer than others

Objects exist in different quantities. Some can be more or fewer than others.

Example 1

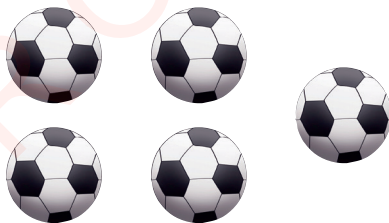


more



few

Example 2



few



more

Exercise 1

Circle the letter of the group with fewer items.

1.

A



B



2.

C



D



3.

E



F



4.

G



H





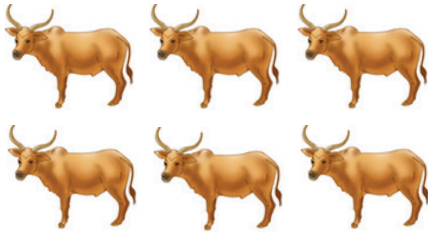
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Exercise 2

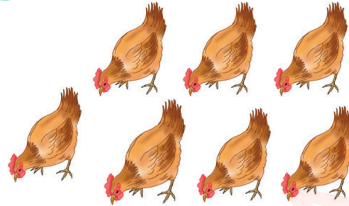
Circle the letter of the group with more items.

1.

A

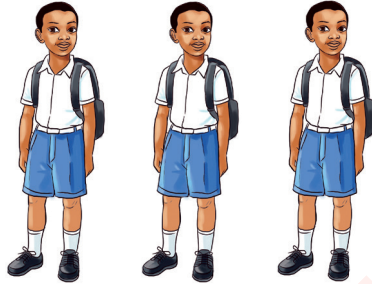


B



2.

C

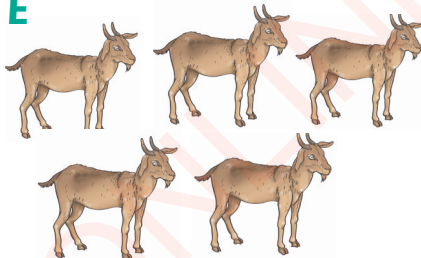


D



3.

E

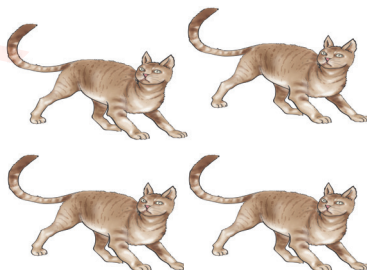


F



4.

G



H





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Chapter Two

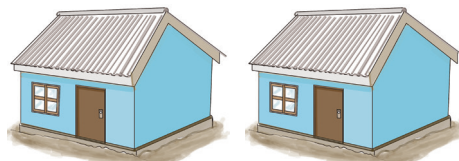
Counting objects and numbers

Counting aloud the objects which do not exceed 9

The quantity of objects is obtained by counting them.

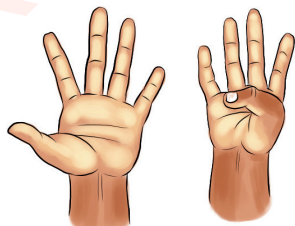
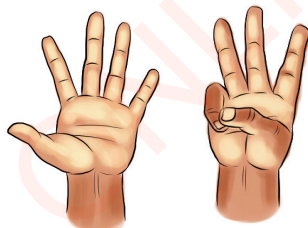
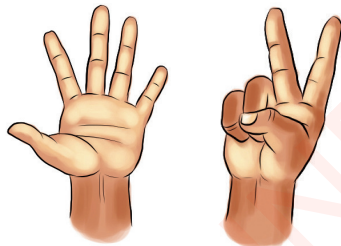
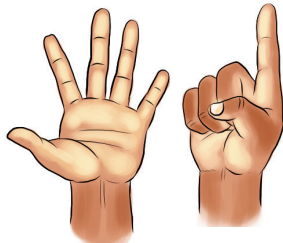
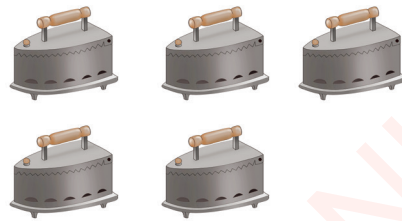
Example

Look at the pictures, then count from 1 to 9 by using fingers.





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Exercise 1

Count the objects in each group.





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Exercise 2

Count the objects in each group.



Chapter Three

Reading numbers from 1 to 9

Reading aloud numbers from 1 to 9

Reading numbers is the best way of understanding and telling the quantity of objects.

Exercise 1

Read aloud these numbers.

1	2	3	4	5
6	7	8	9	

Exercise 2

Read aloud these numbers.

1	2	3	4	5
3	6	7	8	9
5	4	5	2	1
9	8	2	6	4
6	2	1	3	7



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Exercise 3

Read the following numbers.

nine	eight	seven	six
five	four	three	two
one	five	nine	four
two	seven	eight	one
three	six	four	five
one	two	three	four
six	seven	eight	nine



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Exercise 4

Draw a line to match each word with its number.

Example two	6
four	8
one	4
three	5
six	7
seven	3
eight	2
nine	1
five	9



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Exercise 5

Draw lines to match the objects with their numbers.

	3
	1
	8
	2
	9
	4
	6
	7
	5



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Chapter Four

Writing numbers from 1 to 9

Writing numbers from 1 to 9 using digits

Writing numbers is the art of tracing numbers or writing words which represent quantity.

Exercise 1

Trace the following numbers by joining the dots.

1			
2			
3			
4			
5			
6			
7			
8			
9			



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Exercise 2

Write the following numbers by using digits.

two

four

seven

nine

one

three

six

five

eight



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Exercise 3

Write the next number.

1.	3, _____	5.	4, _____
2.	6, _____	6.	7, _____
3.	8, _____	7.	2, _____
4.	1, _____	8.	5, _____

Exercise 4

Fill in the missing numbers.

1.	6, _____, 8	5.	1, _____, 3
2.	7, _____, 9	6.	5, _____, 7
3.	4, _____, 6	7.	3, _____, 5
4.	2, _____, 4		



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Exercise 5

Fill in the missing numbers.

1.	3, 4, ____, 6, ____, 8, ____
2.	____, 7, ____, 9
3.	2, 3, ____, 5, ____, 7, ____
4.	____, 4, ____, 6, ____, ____
5.	2, ____, 4, ____, 6, ____
6.	____, 7, 6, 5, ____, 3, ____
7.	9, 8, ____, ____, 5, 4
8.	6, 5, ____, 3, 2, ____
9.	7, 6, 5, 4, ____, ____, 1
10.	8, 7, ____, 5, ____, 3, ____

Exercise 6

Write the missing numbers along each horizontal line.

1	_____	3	4	_____
5	_____	7	_____	9
_____	4	5	6	_____
_____	2	3	_____	5
5	6	7	8	_____

Exercise 7

Write these numbers in words.

3	
6	
1	
4	
7	



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8	
5	
9	
2	

Exercise 8

Write the total number of objects in the space provided.

1.		
2.		
3.		
4.		
5.		

Chapter Five

Number zero

Recognising number zero

Number zero means there is no object. The digit which represents zero is 0.

Example

			
3	2	1	0

Exercise 1

Read aloud these numbers.

8	9	0	6	1
2	0	7	3	0
0	9	3	6	1
6	1	3	0	2

Exercise 2

Trace zero by joining the dots.

0



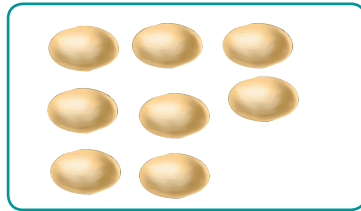


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Exercise 3

Write the total number of the objects in each box.

1.



.....

.....

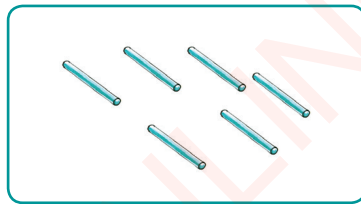
2.



.....

.....

3.



.....

.....

4.



.....

.....

Chapter Six

Addition

Adding objects to get sums not exceeding 9

Addition means putting together two or more objects.

Example 1



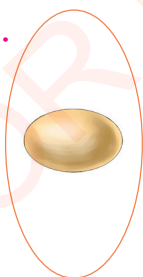
Example 2



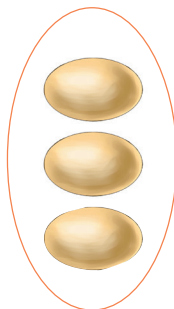
Exercise 1

Draw pictures of the sum of the given objects.

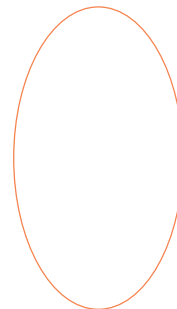
1.



add



equals





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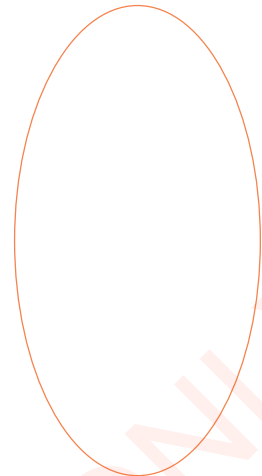
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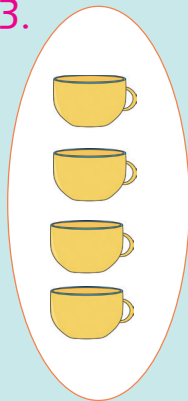
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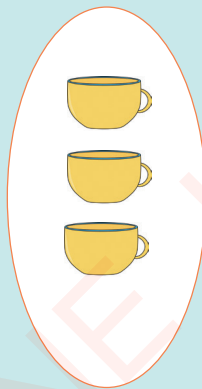
equals



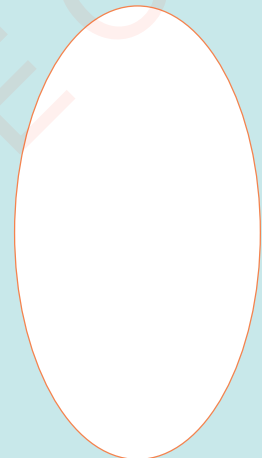
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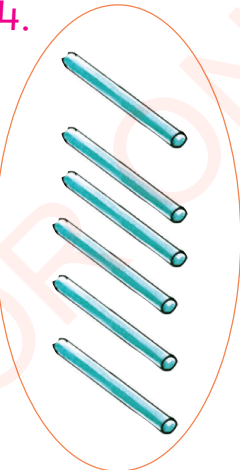
add



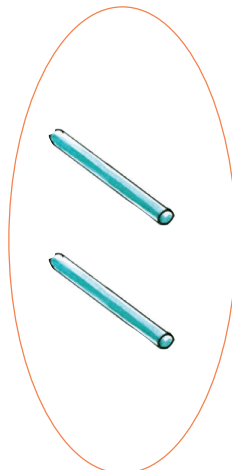
equals



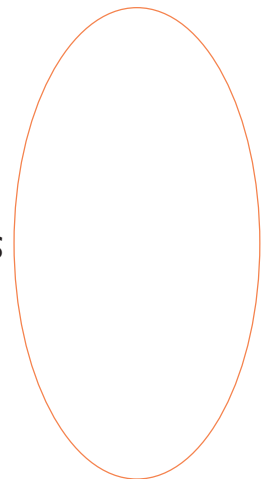
4.



add



equals

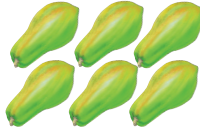




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Adding objects and numbers

Example 1

	add		equals	
3	+	3	=	6

Example 2

	add		equals	
2	+	1	=	3

Exercise 2

Fill the sum of the objects and numbers in the boxes.

1.

	add		equals	
2	+	4	=	

2.

	add		equals	
3	+	1	=	

3.

	add		equals	
0	+	9	=	



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Adding two numbers horizontally

Example 1 $5 + 3 = 8$

5	+	3	=	8
				

Example 2 $4 + 2 = 6$

4	+	2	=	6
				

Exercise 3

Write answers in the boxes.

1.	$1 + 1 =$		5.	$5 + 0 =$	
2.	$3 + 5 =$		6.	$5 + 2 =$	
3.	$6 + 2 =$		7.	$1 + 7 =$	
4.	$8 + 1 =$		8.	$6 + 2 =$	

Exercise 4

Write answers in the boxes.

1.	$2 + 4 =$		5.	$7 + 2 =$	
2.	$5 + 3 =$		6.	$9 + 0 =$	
3.	$7 + 1 =$		7.	$2 + 2 =$	
4.	$3 + 2 =$		8.	$8 + 0 =$	

Adding three numbers horizontally

Example 1

$$3 + 2 + 1 = 6$$

	+		+		=	
3	+	2	+	1	=	6

Example 2

$$4 + 1 + 2 = 7$$

	+		+		=	
4	+	1	+	2	=	7



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Exercise 5

Write answers in the boxes.

1.	$1 + 2 + 3 =$		6.	$4 + 3 + 0 =$	
2.	$6 + 2 + 0 =$		7.	$3 + 2 + 4 =$	
3.	$2 + 5 + 1 =$		8.	$3 + 0 + 3 =$	
4.	$7 + 0 + 2 =$		9.	$2 + 5 + 0 =$	
5.	$2 + 2 + 2 =$		10.	$1 + 2 + 5 =$	

Exercise 6

Write answers in the boxes.

1.	$0 + 9 + 0 =$		6.	$1 + 3 + 2 =$	
2.	$4 + 4 + 0 =$		7.	$7 + 1 + 1 =$	
3.	$2 + 3 + 2 =$		8.	$3 + 5 + 0 =$	
4.	$7 + 0 + 2 =$		9.	$1 + 3 + 3 =$	
5.	$5 + 1 + 0 =$		10.	$4 + 0 + 5 =$	



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Filling a number in the blank space provided

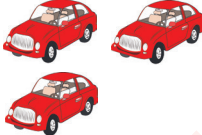
Example 1

$$8 + \boxed{1} = 9$$

8	+	1	=	9
	+		=	

Example 2

$$\boxed{4} + 3 = 7$$

4	+	3	=	7
	+		=	

Exercise 7

Fill the number in each blank space provided.

1.	3	+		=	7	6.		+	6	=	7
2.	2	+		=	5	7.		+	2	=	5
3.	8	+		=	8	8.		+	0	=	7
4.	1	+		=	8	9.		+	5	=	6
5.	6	+		=	9	10.		+	1	=	4





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Exercise 8

Fill the number in the space provided.

1.	$1 + \square = 3$	6.	$7 + \square = 8$
2.	$0 + \square = 2$	7.	$7 + \square = 9$
3.	$4 + \square = 9$	8.	$\square + 4 = 6$
4.	$5 + \square = 6$	9.	$\square + 3 = 8$
5.	$5 + \square = 7$	10.	$\square + 2 = 4$

Adding numbers vertically

Example 1

$$\begin{array}{r} 5 \\ + 2 \\ \hline 7 \end{array}$$




Example 2

$$\begin{array}{r} 6 \\ + 3 \\ \hline 9 \end{array}$$




Exercise 9

Write the sum in the space provided.

1.	$\begin{array}{r} 1 \\ + 3 \\ \hline \end{array}$	2.	$\begin{array}{r} 2 \\ + 6 \\ \hline \end{array}$	3.	$\begin{array}{r} 7 \\ + 0 \\ \hline \end{array}$
----	---	----	---	----	---

4.	$\begin{array}{r} 4 \\ + 4 \\ \hline \end{array}$	6.	$\begin{array}{r} 6 \\ + 1 \\ \hline \end{array}$	8.	$\begin{array}{r} 4 \\ + 2 \\ \hline \end{array}$
5.	$\begin{array}{r} 4 \\ + 3 \\ \hline \end{array}$	7.	$\begin{array}{r} 9 \\ + 0 \\ \hline \end{array}$	9.	$\begin{array}{r} 1 \\ + 8 \\ \hline \end{array}$

Exercise 10

Write the sum in each of the following questions.

1.	$\begin{array}{r} 2 \\ + 7 \\ \hline \end{array}$	4.	$\begin{array}{r} 1 \\ + 0 \\ \hline \end{array}$	7.	$\begin{array}{r} 5 \\ + 1 \\ \hline \end{array}$
2.	$\begin{array}{r} 2 \\ + 2 \\ \hline \end{array}$	5.	$\begin{array}{r} 3 \\ + 6 \\ \hline \end{array}$	8.	$\begin{array}{r} 8 \\ + 1 \\ \hline \end{array}$
3.	$\begin{array}{r} 2 \\ + 5 \\ \hline \end{array}$	6.	$\begin{array}{r} 3 \\ + 5 \\ \hline \end{array}$	9.	$\begin{array}{r} 7 \\ + 2 \\ \hline \end{array}$



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Chapter Seven

Subtraction

Subtracting objects and numbers not exceeding 9

Subtraction means removing objects from a collection. That is, you remain with fewer objects.

Example



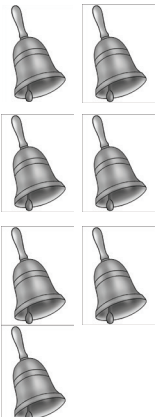
Exercise 1

Draw the remaining objects.

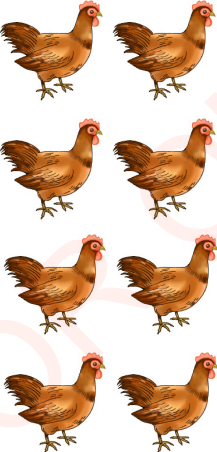
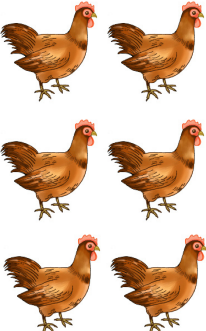




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	take away		remains	
---	-----------	---	---------	--

	take away		remains	
--	-----------	--	---------	--

	take away		remains	
---	-----------	---	---------	--

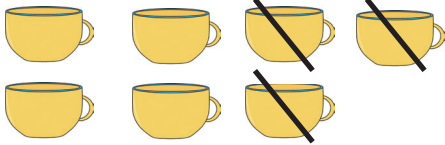




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Subtracting objects and numbers

Example 1

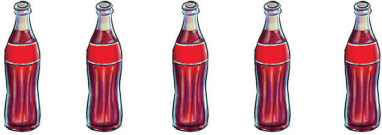
	remains	
$7 - 3$	$=$	4

Example 2

	remains	
$5 - 2$	$=$	3

Exercise 2

Draw the remaining objects. Write their number in each box.

1.		remains	
	$6 - 4$	$=$	
2.		remains	
	$5 - 1$	$=$	

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3.

	remains	
$5 - 2$	$=$	

4.

	remains	
$3 - 2$	$=$	

5.

	remains	
$7 - 2$	$=$	

Subtracting numbers horizontally

Exercise 3

Write the answers in the boxes provided.

1.	$9 - 1 =$	6.	$9 - 9 =$
2.	$8 - 3 =$	7.	$8 - 6 =$
3.	$7 - 5 =$	8.	$5 - 0 =$
4.	$6 - 2 =$	9.	$3 - 0 =$
5.	$5 - 1 =$	10.	$4 - 2 =$



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Exercise 4

Write the answers in each of the following questions.

1.	$4 - 3 = \square$	6.	$7 - 6 = \square$
2.	$3 - 1 = \square$	7.	$8 - 7 = \square$
3.	$2 - 2 = \square$	8.	$5 - 2 = \square$
4.	$7 - 6 = \square$	9.	$1 - 1 = \square$
5.	$6 - 4 = \square$	10.	$9 - 5 = \square$

Exercise 5

Write the answers in each of the following questions.

1.	$7 - 3 = \square$	6.	$9 - 4 = \square$
2.	$9 - 6 = \square$	7.	$6 - 6 = \square$
3.	$4 - 2 = \square$	8.	$8 - 1 = \square$
4.	$4 - 3 = \square$	9.	$5 - 0 = \square$
5.	$6 - 0 = \square$	10.	$7 - 2 = \square$

Filling the missing numbers in the boxes

Example 1

$$4 - \boxed{3} = 1$$


remains 

Example 2

$$\boxed{7} - 2 = 5$$


remains 

Exercise 6

Fill the missing numbers in the boxes provided.

1.	6 - = 3	5.	3 - = 2
2.	8 - = 0	6.	4 - = 0
3.	4 - = 2	7.	5 - = 5
4.	9 - = 3	8.	0 - = 0

Exercise 7

Fill the missing numbers in the boxes provided.

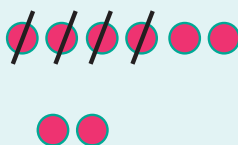
1.	- 2 = 6	5.	- 1 = 3
2.	- 6 = 1	6.	- 0 = 1
3.	- 2 = 0	7.	- 3 = 5
4.	- 2 = 7	8.	- 2 = 4



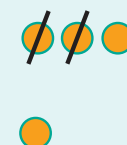
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Subtracting numbers vertically

Example 1

$$\begin{array}{r} 6 \\ - 4 \\ \hline 2 \end{array}$$


Example 2

$$\begin{array}{r} 3 \\ - 2 \\ \hline 1 \end{array}$$


Exercise 8

Write the answer in each of the following questions.

1.	$\begin{array}{r} 2 \\ - 0 \\ \hline \end{array}$	4.	$\begin{array}{r} 7 \\ - 1 \\ \hline \end{array}$	7.	$\begin{array}{r} 5 \\ - 2 \\ \hline \end{array}$
2.	$\begin{array}{r} 3 \\ - 0 \\ \hline \end{array}$	5.	$\begin{array}{r} 1 \\ - 0 \\ \hline \end{array}$	8.	$\begin{array}{r} 5 \\ - 1 \\ \hline \end{array}$
3.	$\begin{array}{r} 5 \\ - 4 \\ \hline \end{array}$	6.	$\begin{array}{r} 6 \\ - 0 \\ \hline \end{array}$	9.	$\begin{array}{r} 7 \\ - 3 \\ \hline \end{array}$

Exercise 9

Write the answer in each of the following questions.

1.

$$\begin{array}{r} 9 \\ - 2 \\ \hline \\ \hline \end{array}$$

4.

$$\begin{array}{r} 8 \\ - 2 \\ \hline \\ \hline \end{array}$$

7.

$$\begin{array}{r} 6 \\ - 5 \\ \hline \\ \hline \end{array}$$

2.

$$\begin{array}{r} 8 \\ - 1 \\ \hline \\ \hline \end{array}$$

5.

$$\begin{array}{r} 6 \\ - 6 \\ \hline \\ \hline \end{array}$$

8.

$$\begin{array}{r} 6 \\ - 2 \\ \hline \\ \hline \end{array}$$

3.

$$\begin{array}{r} 8 \\ - 7 \\ \hline \\ \hline \end{array}$$

6.

$$\begin{array}{r} 9 \\ - 4 \\ \hline \\ \hline \end{array}$$

9.

$$\begin{array}{r} 7 \\ - 5 \\ \hline \\ \hline \end{array}$$



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Chapter Eight

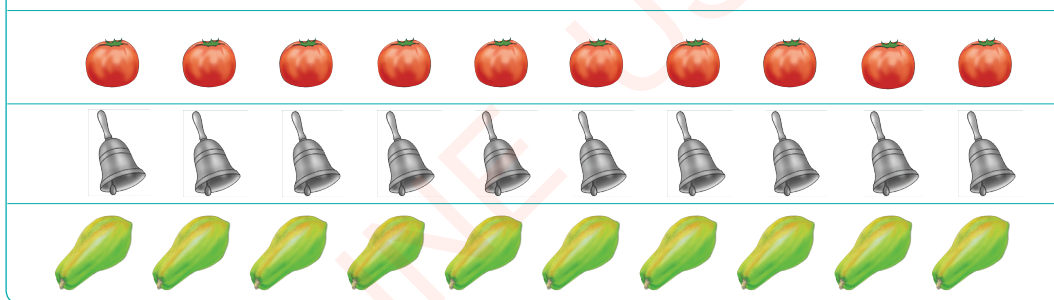
Recognising number 10

Counting objects up to 10

Zero to nine are not the only numbers available. You can write the number of objects which are more than nine. Now, it is time to learn number ten.

Exercise 1

Count aloud the following objects.



Exercise 2

Read aloud these numbers.

1	2	3	4	5	6	7	8	9	10
8	3	6	10	7	1	2	9	4	5
10	6	4	2	1	3	7	5	8	9
8	3	6	7	4	10	5	2	9	1
4	7	5	10	3	6	2	8	1	9



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Exercise 3

Circle number 10 in each of the following rows.

1.	1	3	4	10	7	6
2.	3	2	8	9	6	10
3.	10	2	1	7	5	8
4.	6	3	4	1	10	5
5.	8	6	10	7	3	6

Adding objects and numbers to obtain a sum of 10

Example



5

add

+



5

equals ten

=

10

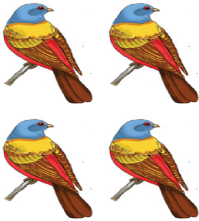
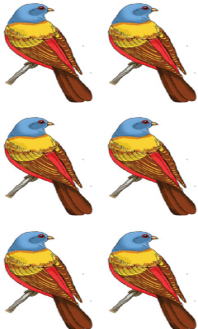
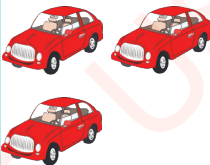
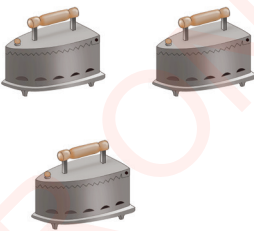
Exercise 4

Add and count the following objects.

	add		equals	
5	+	5	=	



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	add		equals	
4	+	6	=	
	add		equals	
7	+	3	=	
	add		equals	
3	+	7	=	



Adding numbers to get 10

Example 1

$$4 + 6 = \boxed{10}$$

Example 2

$$7 + 3 = \boxed{10}$$

Exercise 5

Write the correct answer in each blank box.

1.	3 + 7 =	5.	8 + 2 =
2.	2 + 8 =	6.	10 + 0 =
3.	6 + 4 =	7.	7 + 3 =
4.	5 + 5 =	8.	9 + 1 =

Filling the missing numbers

Example 1

$$\boxed{2} + 8 = 10$$

Example 2

$$9 + \boxed{1} = 10$$

Exercise 6

Fill the correct number in each blank box.

1.	1 + = 10	5.	+ 4 = 10
2.	5 + = 10	6.	+ 8 = 10
3.	3 + = 10	7.	+ 5 = 10
4.	9 + = 10	8.	+ 6 = 10



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Subtracting numbers not exceeding 10

Example 1

$$10 - 6 = 4$$

Example 2

$$4 - 2 = 2$$

Exercise 7

Write the answer after subtracting the given numbers horizontally.

1.	$7 - 7 =$		11.	$10 - 1 =$	
2.	$10 - 8 =$		12.	$10 - 0 =$	
3.	$10 - 9 =$		13.	$4 - 3 =$	
4.	$8 - 5 =$		14.	$8 - 4 =$	
5.	$9 - 4 =$		15.	$7 - 5 =$	
6.	$6 - 6 =$		16.	$5 - 4 =$	
7.	$4 - 1 =$		17.	$9 - 8 =$	
8.	$6 - 4 =$		18.	$6 - 5 =$	
9.	$8 - 3 =$		19.	$5 - 1 =$	
10.	$2 - 1 =$		20.	$3 - 2 =$	



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Exercise 8

Write the correct answer in each of the following questions.

1. $\begin{array}{r} 10 \\ - 2 \\ \hline \\ \hline \end{array}$	6. $\begin{array}{r} 10 \\ - 9 \\ \hline \\ \hline \end{array}$	11. $\begin{array}{r} 5 \\ - 2 \\ \hline \\ \hline \end{array}$
2. $\begin{array}{r} 10 \\ - 5 \\ \hline \\ \hline \end{array}$	7. $\begin{array}{r} 9 \\ - 8 \\ \hline \\ \hline \end{array}$	12. $\begin{array}{r} 5 \\ - 1 \\ \hline \\ \hline \end{array}$
3. $\begin{array}{r} 5 \\ - 4 \\ \hline \\ \hline \end{array}$	8. $\begin{array}{r} 6 \\ - 0 \\ \hline \\ \hline \end{array}$	13. $\begin{array}{r} 8 \\ - 8 \\ \hline \\ \hline \end{array}$
4. $\begin{array}{r} 3 \\ - 2 \\ \hline \\ \hline \end{array}$	9. $\begin{array}{r} 5 \\ - 3 \\ \hline \\ \hline \end{array}$	14. $\begin{array}{r} 10 \\ - 6 \\ \hline \\ \hline \end{array}$
5. $\begin{array}{r} 10 \\ - 0 \\ \hline \\ \hline \end{array}$	10. $\begin{array}{r} 9 \\ - 2 \\ \hline \\ \hline \end{array}$	15. $\begin{array}{r} 4 \\ - 4 \\ \hline \\ \hline \end{array}$



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Adding and subtracting horizontally numbers not exceeding 10

Exercise 9

Write the correct answers in the spaces provided.

1.	$9 - 4 =$		11.	$4 + 5 =$	
2.	$9 - 8 =$		12.	$9 - 9 =$	
3.	$7 + 3 =$		13.	$9 + 1 =$	
4.	$5 + 5 =$		14.	$3 + 7 =$	
5.	$6 - 1 =$		15.	$5 + 2 =$	
6.	$8 - 5 =$		16.	$6 - 3 =$	
7.	$6 + 2 =$		17.	$8 + 1 =$	
8.	$3 + 6 =$		18.	$4 + 2 =$	
9.	$10 - 4 =$		19.	$8 - 3 =$	
10.	$9 - 7 =$		20.	$7 - 5 =$	

Adding and subtracting vertically numbers not exceeding 10

Exercise 10

Write the correct answers in the spaces provided.

1.	$\begin{array}{r} 8 \\ + 2 \\ \hline \end{array}$	5.	$\begin{array}{r} 6 \\ - 3 \\ \hline \end{array}$	9.	$\begin{array}{r} 9 \\ - 8 \\ \hline \end{array}$
2.	$\begin{array}{r} 4 \\ + 3 \\ \hline \end{array}$	6.	$\begin{array}{r} 3 \\ - 3 \\ \hline \end{array}$	10.	$\begin{array}{r} 2 \\ + 7 \\ \hline \end{array}$
3.	$\begin{array}{r} 9 \\ - 7 \\ \hline \end{array}$	7.	$\begin{array}{r} 6 \\ - 6 \\ \hline \end{array}$	11.	$\begin{array}{r} 5 \\ + 5 \\ \hline \end{array}$
4.	$\begin{array}{r} 10 \\ - 2 \\ \hline \end{array}$	8.	$\begin{array}{r} 8 \\ - 5 \\ \hline \end{array}$	12.	$\begin{array}{r} 10 \\ - 7 \\ \hline \end{array}$



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Exercise 11

Write the correct answers in the spaces provided.

1.

$$\begin{array}{r} 1 \\ + 9 \\ \hline \\ \hline \end{array}$$

5.

$$\begin{array}{r} 5 \\ - 3 \\ \hline \\ \hline \end{array}$$

9.

$$\begin{array}{r} 4 \\ + 6 \\ \hline \\ \hline \end{array}$$

2.

$$\begin{array}{r} 9 \\ - 5 \\ \hline \\ \hline \end{array}$$

6.

$$\begin{array}{r} 7 \\ + 2 \\ \hline \\ \hline \end{array}$$

10.

$$\begin{array}{r} 10 \\ - 6 \\ \hline \\ \hline \end{array}$$

3.

$$\begin{array}{r} 10 \\ - 9 \\ \hline \\ \hline \end{array}$$

7.

$$\begin{array}{r} 8 \\ - 5 \\ \hline \\ \hline \end{array}$$

11.

$$\begin{array}{r} 10 \\ - 5 \\ \hline \\ \hline \end{array}$$

4.

$$\begin{array}{r} 2 \\ + 8 \\ \hline \\ \hline \end{array}$$

8.

$$\begin{array}{r} 7 \\ + 3 \\ \hline \\ \hline \end{array}$$

12.

$$\begin{array}{r} 6 \\ + 4 \\ \hline \\ \hline \end{array}$$



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Chapter Nine

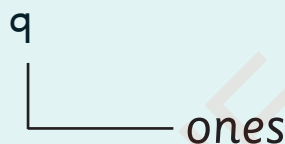
Expressing numbers in ones and tens

The value of a digit depends on its place in the number. A digit is any number from 0 to 9. The first place from the right of the number is known as ones. The second place is called tens.

Example 1 Write the place value of number 9.

Solution

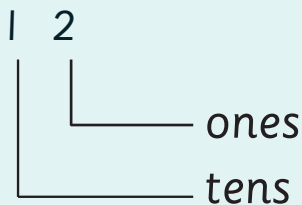
Number 9 has only one digit. Hence 9 is in the ones place.



Example 2 Write the place value of number 12.

Solution

Number 12 has two digits. The first place from the right has 2 and second place has 1. Hence, 2 is in the ones place and one in the tens place.



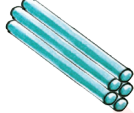
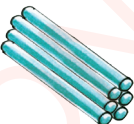
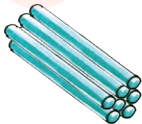
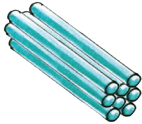


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Reading ones

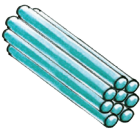
Exercise 1

Read numbers in ones from 1 to 9.

1.		1 ones	1
2.		2 ones	2
3.		3 ones	3
4.		4 ones	4
5.		5 ones	5
6.		6 ones	6
7.		7 ones	7
8.		8 ones	8



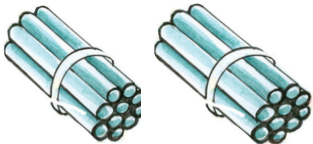
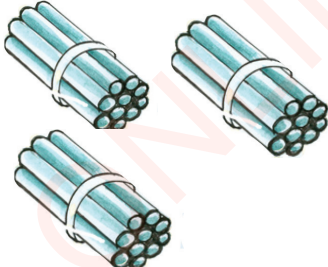
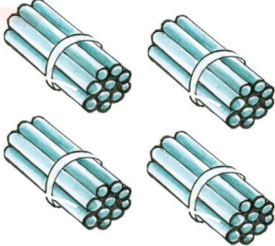
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9.		9 ones	9
----	---	--------	---

Reading tens

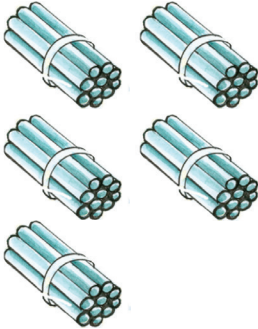
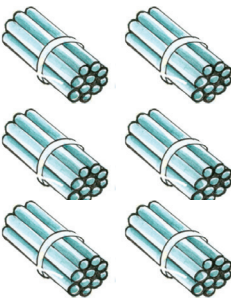
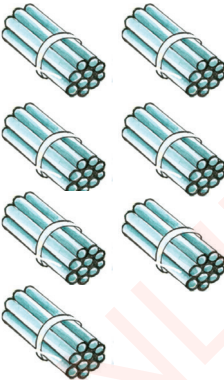
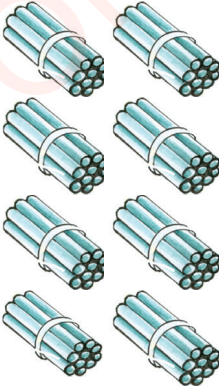
Exercise 2

Read numbers in tens from 10 to 90.

1.		1 tens	10
2.		2 tens	20
3.		3 tens	30
4.		4 tens	40

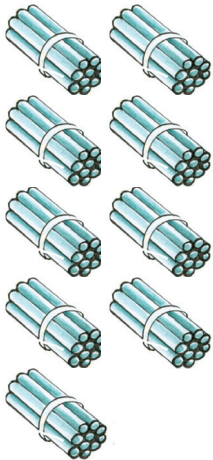


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5.		5 tens	50
6.		6 tens	60
7.		7 tens	70
8.		8 tens	80

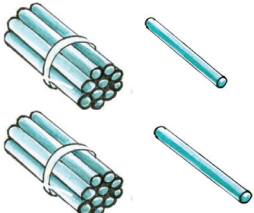


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9.		9 tens	90
----	---	--------	----

Exercise 3

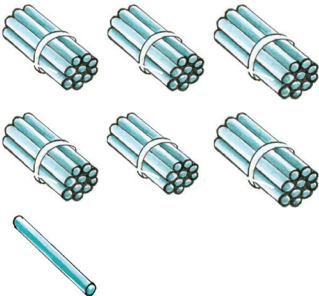
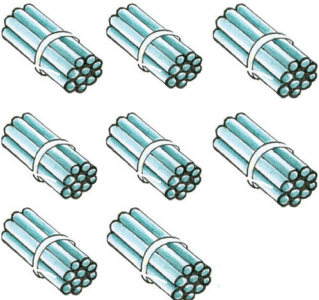
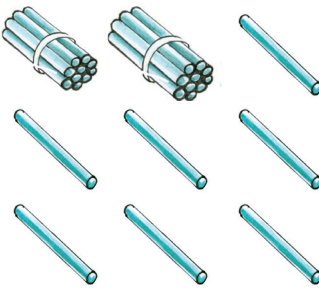
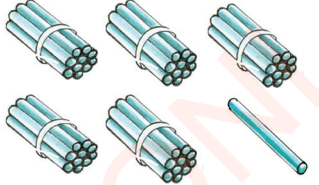
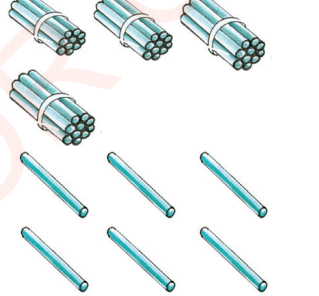
Read and count the following numbers in ones and tens.

	tens	ones	22
	2	2	
	tens	ones	10
	1	0	
	tens	ones	30
	3	0	





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	tens	ones	61
	6	1	
	tens	ones	80
	8	0	
	tens	ones	27
	2	7	
	tens	ones	51
	5	1	
	tens	ones	46
	4	6	



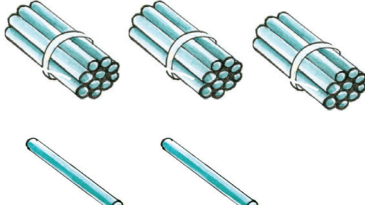


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Writing numbers not exceeding 99 as ones and tens

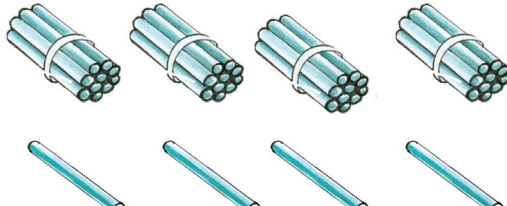
Fill the numbers of ones and tens in the boxes.

Example 1

 32

tens	ones
3	2

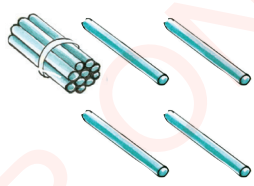
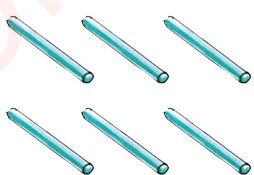
Example 2

 44

tens	ones
4	4

Exercise 4

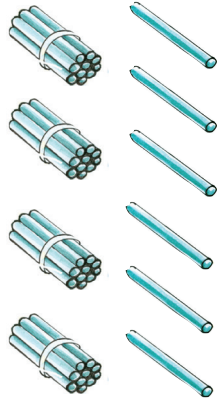
Fill the number of ones and tens in the boxes.

1.		14 =	tens 	ones
2.		6 =	tens 	ones



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3.

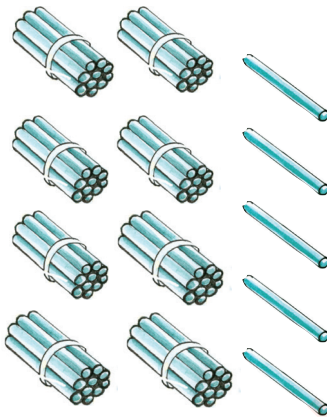


$$46 =$$

tens

ones

4.

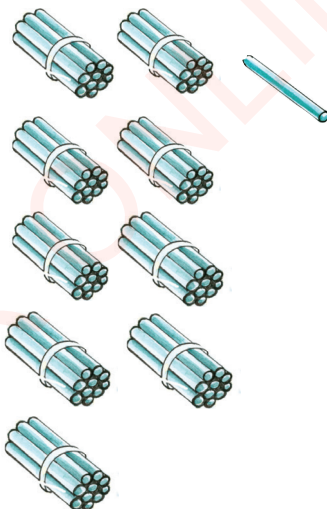


$$85 =$$

tens

ones

5.



$$91 =$$

tens

ones



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Write the place value of each digit.

Example 1

61
└─── ones
└─── tens

Example 2

7
└─── ones

Exercise 5

Write the place value of each digit.

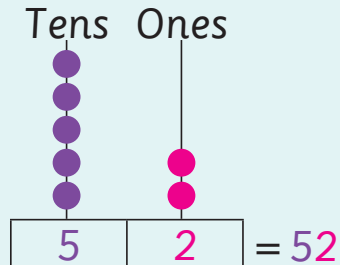
1.	19 └─── └───	6.	34 └─── └───
2.	23 └─── └───	7.	45 └─── └───
3.	30 └─── └───	8.	10 └─── └───
4.	16 └─── └───	9.	3 └─── └───
5.	9 └─── └───	10.	6 └─── └───



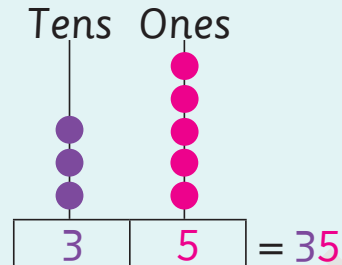
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Write the number from the abacus.

Example 1

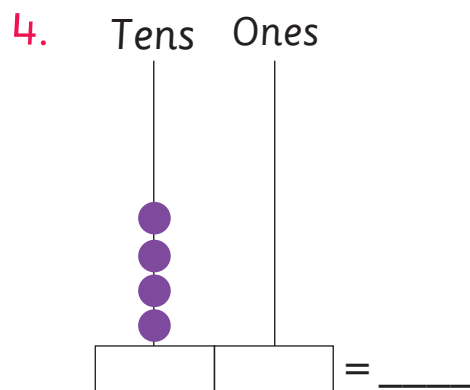
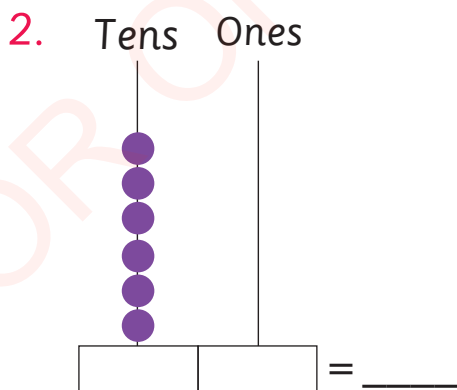
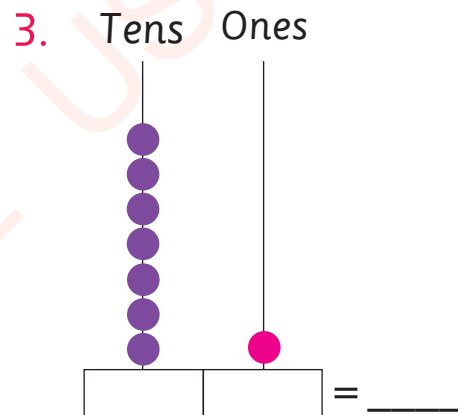
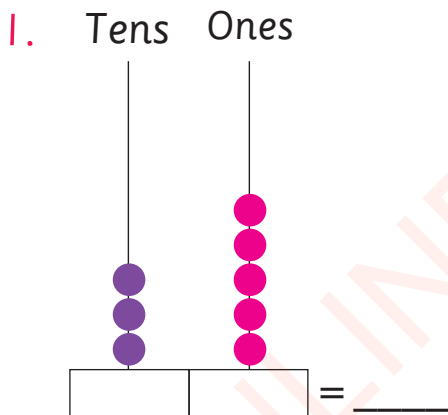


Example 2



Exercise 6

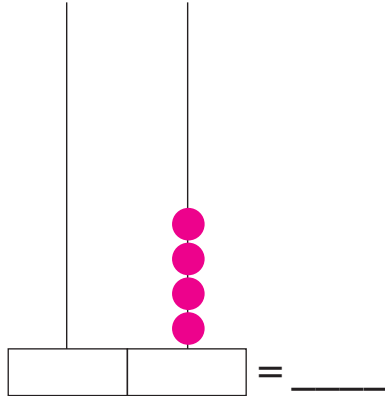
Write the number from the abacus.



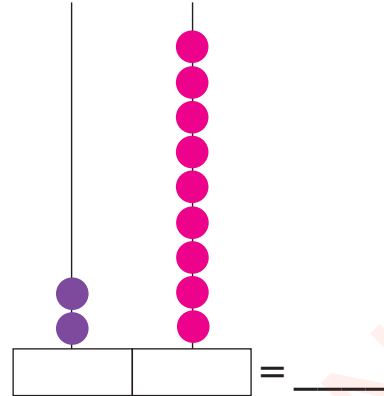


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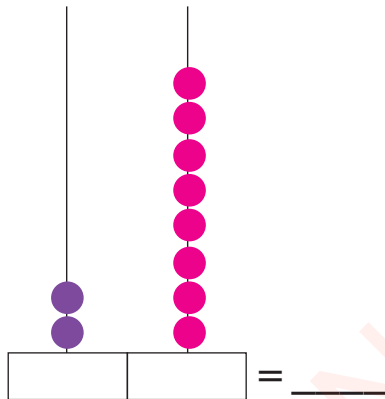
5. Tens Ones



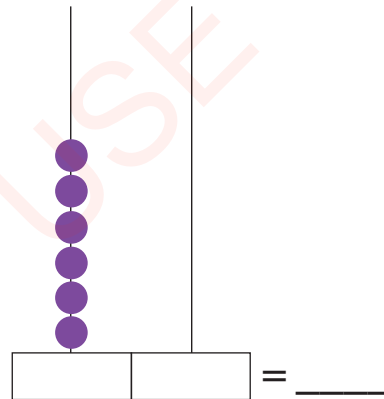
8. Tens Ones



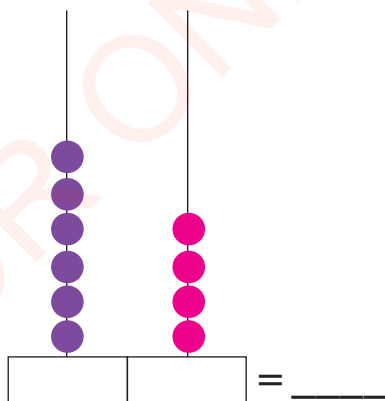
6. Tens Ones



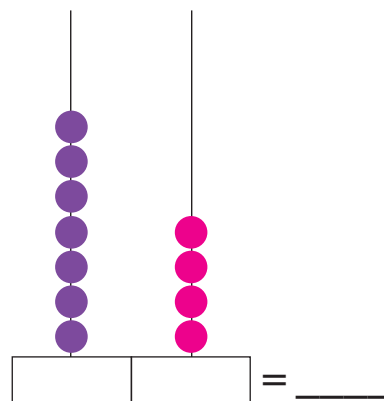
9. Tens Ones



7. Tens Ones



10. Tens Ones



Exercise 7

Write the numbers of tens and ones in the boxes.

1.	34	=		tens		ones
2.	73	=		tens		ones
3.	5	=		tens		ones
4.	29	=		tens		ones
5.	90	=		tens		ones
6.	66	=		tens		ones
7.	87	=		tens		ones
8.	55	=		tens		ones

Exercise 8

Write the numbers in the boxes.

1.	2	tens	5	ones	=	
2.	4	tens	8	ones	=	
3.	1	tens	7	ones	=	
4.	5	tens	9	ones	=	
5.	4	tens	6	ones	=	
6.	9	tens	9	ones	=	
7.	1	tens	5	ones	=	
8.	0	tens	6	ones	=	

Chapter Ten

Reading numbers from 11 to 99

Reading numbers from 11 to 99 in words

If there are more than ten objects, there is a way to represent their quantity. Now you learn how to read numbers from 11 to 99.

Exercise 1

Read the following numbers.

11 eleven	52 fifty-two
17 seventeen	56 fifty-six
23 twenty-three	60 sixty
25 twenty-five	64 sixty-four
15 fifteen	73 seventy-three
38 thirty-eight	79 seventy-nine
45 forty-five	82 eighty-two
18 eighteen	81 eighty-one
96 ninety-six	98 ninety-eight



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Reading numbers in numerals from 11 to 99

Exercise 2

Read the following numbers.

11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	



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Exercise 3

Read the following numbers.

1.	4, 20, 35, 18	6.	22, 27, 35, 92
2.	37, 44, 10, 29	7.	92, 86, 31, 90
3.	18, 32, 79, 80	8.	99, 18, 30, 53
4.	88, 99, 43, 50	9.	11, 18, 61, 15
5.	12, 45, 60, 70	10.	17, 53, 41, 92

Exercise 4

Read the following numbers.

11	99	54	20	13	76	98	60	33	20
85	72	45	38	25	54	31	73	29	17
44	32	76	13	54	98	19	31	15	40
97	72	43	64	13	26	88	59	91	63
26	79	18	54	36	60	82	49	99	15

Chapter Eleven

Writing numbers from 11 to 99

Writing numbers in numerals and in words

Numbers can be written by using numerals or words. Numerals are numbers formed by one or more digits from 0 to 9.

Write the following numbers in words.

Example 1

Numbers in numerals	Numbers in words
10	Ten
20	Twenty
30	Thirty
40	Forty
50	Fifty
60	Sixty
70	Seventy
80	Eighty
90	Ninety

Example 2

Numbers in numerals	Numbers in words
11	Eleven
25	Twenty-five
33	Thirty-three
44	Forty-four
57	Fifty-seven
62	Sixty-two
79	Seventy-nine
88	Eighty-eight
99	Ninety-nine

Exercise 1

Copy the following numbers.

1.	Forty-five
2.	Seventy-nine
3.	Fifty-two
4.	Thirty-seven
5.	Eleven
6.	Fourteen
7.	Eighty
8.	Ninety-one

Exercise 2

Write the following numbers in words.

	Numbers in numerals	Numbers in words
1.	36	
2.	22	
3.	74	
4.	48	
5.	88	
6.	19	
7.	51	
8.	15	
9.	30	
10.	84	

Writing numbers in numerals

Example

Write the following numbers in numerals.

Numbers in words	Numbers in numerals
Twelve	12
Ninety-three	93
Seventy-eight	78
Forty	40
Seventy-two	72
Sixty-five	65
Twenty-four	24
Sixteen	16

Exercise 3

Write the following numbers in numerals.

	Numbers in words	Numbers in numerals
1.	Twenty-nine	
2.	Thirty-three	
3.	Eighteen	
4.	Fifty-seven	
5.	Ninety-two	
6.	Sixty-one	
7.	Eighty-six	
8.	Seventy-seven	

Exercise 4

Write the following numbers in numerals.

	Numbers in words	Numbers in numerals
1.	Ninety-eight	
2.	Eighty	
3.	Seventy-one	
4.	Forty-four	
5.	Thirty-eight	
6.	Seventeen	
7.	Twenty-one	
8.	Thirty-one	



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Writing numbers larger than and smaller than others

Examples

Numbers larger than 14 are 15, 17, 20, 22, 24, and 30.

Numbers smaller than 55 are 54, 50, 48, 47, 46, and 40.

Exercise 5

Write numbers smaller than and larger than the given numbers.

1.	Numbers smaller than 56 are 54, 20, 31, __, __, __
2.	Numbers larger than 40 are 68, 77, 99, __, __, __
3.	Numbers smaller than 99 are 98, 90, 87, __, __, __
4.	Numbers larger than 11 are 12, 14, 15, __, __, __
5.	Numbers smaller than 60 are 59, 55, 53, __, __, __
6.	Numbers larger than 50 are 51, 52, 55, __, __, __
7.	Numbers smaller than 25 are 24, 20, 19, __, __, __
8.	Numbers larger than 11 are 20, 23, 25, __, __, __
9.	Numbers smaller than 80 are 75, 72, 71, __, __, __
10.	Numbers larger than 15 are 16, 18, 30, __, __, __

Chapter Twelve

Adding numbers to obtain sums not exceeding 99

Numbers can be added horizontally or vertically.

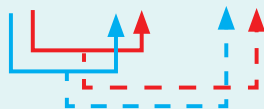
Adding numbers horizontally without regrouping

Example 1

$$53 + 36 =$$

Steps

$$53 + 36 = 89$$



Steps

1. Add the ones,
 $3 + 6 = 9$

Write the answer
in the ones place

2. Add the tens,
 $5 + 3 = 8$

Write the answer
in the tens place

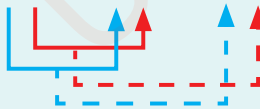
$$53 + 36 = 89$$

Example 2

$$22 + 45 =$$

Steps

$$22 + 45 = 67$$



Steps

1. Add the ones,
 $2 + 5 = 7$

Write the answer
in the ones place

2. Add the tens,
 $2 + 4 = 6$

Write the answer
in the tens place

$$22 + 45 = 67$$



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Exercise 1

Add the following numbers horizontally.

1.	$30 + 8 =$	11.	$75 + 23 =$
2.	$61 + 7 =$	12.	$30 + 17 =$
3.	$28 + 11 =$	13.	$25 + 22 =$
4.	$72 + 14 =$	14.	$36 + 13 =$
5.	$31 + 35 =$	15.	$90 + 7 =$
6.	$85 + 11 =$	16.	$42 + 35 =$
7.	$8 + 91 =$	17.	$20 + 42 =$
8.	$21 + 63 =$	18.	$80 + 10 =$
9.	$30 + 60 =$	19.	$45 + 22 =$
10.	$25 + 34 =$	20.	$25 + 15 =$



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Exercise 2

Write the correct answer in each of the following.

1. $26 + 71 =$	10. $52 + 33 =$
2. $16 + 82 =$	11. $70 + 11 =$
3. $76 + 23 =$	12. $20 + 54 =$
4. $78 + 0 =$	13. $53 + 22 =$
5. $73 + 4 =$	14. $81 + 8 =$
6. $63 + 6 =$	15. $33 + 33 =$
7. $12 + 84 =$	16. $23 + 54 =$
8. $17 + 80 =$	17. $25 + 30 =$
9. $66 + 2 =$	18. $14 + 60 =$



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Adding numbers vertically without regrouping

Example

$$\begin{array}{r} 43 \\ + 21 \\ \hline \end{array}$$

Solution

Add the ones

$$\begin{array}{r|l} 4 & 3 \\ + & 21 \\ \hline & 4 \end{array}$$

Add the tens

$$\begin{array}{r|l} 4 & 3 \\ + & 21 \\ \hline 6 & 4 \end{array}$$

The answer is 64

Exercise 3

Add the following numbers vertically.

1.	$\begin{array}{r} 17 \\ + 62 \\ \hline \end{array}$	4.	$\begin{array}{r} 70 \\ + 25 \\ \hline \end{array}$	7.	$\begin{array}{r} 80 \\ + 14 \\ \hline \end{array}$	10.	$\begin{array}{r} 13 \\ + 15 \\ \hline \end{array}$
2.	$\begin{array}{r} 33 \\ + 33 \\ \hline \end{array}$	5.	$\begin{array}{r} 90 \\ + 8 \\ \hline \end{array}$	8.	$\begin{array}{r} 77 \\ + 2 \\ \hline \end{array}$	11.	$\begin{array}{r} 21 \\ + 46 \\ \hline \end{array}$
3.	$\begin{array}{r} 87 \\ + 12 \\ \hline \end{array}$	6.	$\begin{array}{r} 16 \\ + 50 \\ \hline \end{array}$	9.	$\begin{array}{r} 86 \\ + 11 \\ \hline \end{array}$	12.	$\begin{array}{r} 44 \\ + 22 \\ \hline \end{array}$

Exercise 4

Add the following numbers vertically.

1.	$\begin{array}{r} 32 \\ + 5 \\ \hline \end{array}$	7.	$\begin{array}{r} 80 \\ + 15 \\ \hline \end{array}$	13.	$\begin{array}{r} 31 \\ + 15 \\ \hline \end{array}$	19.	$\begin{array}{r} 13 \\ + 20 \\ \hline \end{array}$
2.	$\begin{array}{r} 25 \\ + 14 \\ \hline \end{array}$	8.	$\begin{array}{r} 70 \\ + 26 \\ \hline \end{array}$	14.	$\begin{array}{r} 17 \\ + 32 \\ \hline \end{array}$	20.	$\begin{array}{r} 34 \\ + 13 \\ \hline \end{array}$
3.	$\begin{array}{r} 32 \\ + 14 \\ \hline \end{array}$	9.	$\begin{array}{r} 11 \\ + 31 \\ \hline \end{array}$	15.	$\begin{array}{r} 43 \\ + 51 \\ \hline \end{array}$	21.	$\begin{array}{r} 87 \\ + 11 \\ \hline \end{array}$
4.	$\begin{array}{r} 15 \\ + 21 \\ \hline \end{array}$	10.	$\begin{array}{r} 16 \\ + 20 \\ \hline \end{array}$	16.	$\begin{array}{r} 90 \\ + 7 \\ \hline \end{array}$	22.	$\begin{array}{r} 19 \\ + 30 \\ \hline \end{array}$
5.	$\begin{array}{r} 30 \\ + 20 \\ \hline \end{array}$	11.	$\begin{array}{r} 20 \\ + 21 \\ \hline \end{array}$	17.	$\begin{array}{r} 12 \\ + 67 \\ \hline \end{array}$	23.	$\begin{array}{r} 50 \\ + 30 \\ \hline \end{array}$
6.	$\begin{array}{r} 18 \\ + 60 \\ \hline \end{array}$	12.	$\begin{array}{r} 40 \\ + 39 \\ \hline \end{array}$	18.	$\begin{array}{r} 50 \\ + 14 \\ \hline \end{array}$	24.	$\begin{array}{r} 14 \\ + 60 \\ \hline \end{array}$



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Adding numbers horizontally by regrouping

Example $46 + 38 =$

Solution

$$\begin{array}{r} 46 + 38 = 84 \\ \text{Diagram showing regrouping: } 6 + 8 = 14. \text{ A blue arrow points from the 6 to the 4, and a red arrow points from the 8 to the 4.} \end{array}$$

1. Add the ones to get 14. Write 4 in the ones place.

2. Carry 1 to the tens, $46 + 38 = \boxed{} \boxed{4}$
Diagram showing regrouping: $6 + 8 = 14$. A red arrow points from the 8 to the 4, and a blue arrow points from the 1 to the 4.

3. Add the group of tens to get 8, $46 + 38 = \boxed{8} \boxed{4}$
Diagram showing regrouping: $1 + 4 + 3 = 8$. A blue arrow points from the 1 to the 4, and a red arrow points from the 3 to the 4.

Write 8 in the tens place. The answer is 84.

Exercise 5

Add these numbers horizontally.

1.	$46 + 9 = \boxed{}$	11.	$73 + 7 = \boxed{}$
2.	$35 + 5 = \boxed{}$	12.	$35 + 49 = \boxed{}$
3.	$74 + 8 = \boxed{}$	13.	$38 + 42 = \boxed{}$
4.	$26 + 44 = \boxed{}$	14.	$23 + 39 = \boxed{}$
5.	$63 + 28 = \boxed{}$	15.	$66 + 28 = \boxed{}$
6.	$79 + 19 = \boxed{}$	16.	$44 + 27 = \boxed{}$
7.	$38 + 48 = \boxed{}$	17.	$38 + 43 = \boxed{}$
8.	$56 + 37 = \boxed{}$	18.	$45 + 49 = \boxed{}$
9.	$43 + 49 = \boxed{}$	19.	$59 + 19 = \boxed{}$
10.	$17 + 9 = \boxed{}$	20.	$78 + 13 = \boxed{}$

Exercise 6

Write the correct answers.

1. $5 + 17 =$	15. $9 + 23 =$
2. $66 + 6 =$	16. $24 + 7 =$
3. $8 + 48 =$	17. $17 + 6 =$
4. $8 + 18 =$	18. $35 + 7 =$
5. $21 + 9 =$	19. $64 + 17 =$
6. $28 + 57 =$	20. $26 + 36 =$
7. $15 + 79 =$	21. $63 + 27 =$
8. $57 + 18 =$	22. $69 + 26 =$
9. $15 + 49 =$	23. $75 + 19 =$
10. $29 + 29 =$	24. $49 + 38 =$
11. $27 + 39 =$	25. $48 + 34 =$
12. $67 + 15 =$	26. $16 + 14 =$
13. $39 + 41 =$	27. $17 + 39 =$
14. $45 + 46 =$	28. $19 + 79 =$



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Adding numbers vertically by regrouping

Example

$$\begin{array}{r} 77 \\ + 19 \\ \hline \end{array}$$

Solution

Steps

1. Add the group of ones, $7 + 9 = 16$.
Write 6 in the ones place,
carry 1 to the tens place.

$$\begin{array}{r} 1 \\ | \\ 77 \\ + 19 \\ \hline 6 \end{array}$$

2. Add the group of tens, $1 + 7 + 1 = 9$.
Write 9 in the tens place.

$$\begin{array}{r} 1 \\ | \\ 77 \\ + 19 \\ \hline 96 \end{array}$$

The answer is 96.

Exercise 7

Add the following numbers vertically.

1.
$$\begin{array}{r} 74 \\ + 18 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 25 \\ + 67 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 49 \\ + 38 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 34 \\ + 48 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 67 \\ + 14 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 45 \\ + 18 \\ \hline \end{array}$$



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7.	$\begin{array}{r} 49 \\ + 49 \\ \hline \hline \end{array}$	11.	$\begin{array}{r} 35 \\ + 35 \\ \hline \hline \end{array}$	15.	$\begin{array}{r} 22 \\ + 69 \\ \hline \hline \end{array}$
8.	$\begin{array}{r} 19 \\ + 19 \\ \hline \hline \end{array}$	12.	$\begin{array}{r} 17 \\ + 38 \\ \hline \hline \end{array}$	16.	$\begin{array}{r} 29 \\ + 39 \\ \hline \hline \end{array}$
9.	$\begin{array}{r} 33 \\ + 37 \\ \hline \hline \end{array}$	13.	$\begin{array}{r} 45 \\ + 26 \\ \hline \hline \end{array}$	17.	$\begin{array}{r} 56 \\ + 28 \\ \hline \hline \end{array}$
10.	$\begin{array}{r} 37 \\ + 49 \\ \hline \hline \end{array}$	14.	$\begin{array}{r} 65 \\ + 27 \\ \hline \hline \end{array}$	18.	$\begin{array}{r} 78 \\ + 13 \\ \hline \hline \end{array}$

Exercise 8

Add the following numbers vertically.

1.	$\begin{array}{r} 65 \\ + 28 \\ \hline \hline \end{array}$	3.	$\begin{array}{r} 19 \\ + 77 \\ \hline \hline \end{array}$	5.	$\begin{array}{r} 38 \\ + 49 \\ \hline \hline \end{array}$
2.	$\begin{array}{r} 26 \\ + 47 \\ \hline \hline \end{array}$	4.	$\begin{array}{r} 17 \\ + 28 \\ \hline \hline \end{array}$	6.	$\begin{array}{r} 9 \\ + 74 \\ \hline \hline \end{array}$



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$$\begin{array}{r} 7. \quad \quad 19 \\ + \quad 7 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad \quad 25 \\ + \quad 8 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 17. \quad \quad 16 \\ + \quad 17 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad \quad 36 \\ + \quad 34 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad \quad 45 \\ + \quad 39 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 18. \quad \quad 77 \\ + \quad 8 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad \quad 59 \\ + \quad 9 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad \quad 89 \\ + \quad 1 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 19. \quad \quad 47 \\ + \quad 47 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad \quad 55 \\ + \quad 8 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad \quad 88 \\ + \quad 4 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 20. \quad \quad 57 \\ + \quad 13 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad \quad 58 \\ + \quad 22 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 16. \quad \quad 67 \\ + \quad 13 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 21. \quad \quad 19 \\ + \quad 29 \\ \hline \\ \hline \end{array}$$



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Solving word problems by adding numbers not exceeding 99

Example

Asha sold 25 bananas and Beti sold 14 bananas.
How many bananas did they sell in total?

Solution

Asha sold 25 bananas

Beti sold 14 bananas.

$$\begin{array}{r} 25 \\ + 14 \\ \hline 39 \end{array}$$

Therefore, Asha and Beti sold a total of 39 bananas.

Exercise 9

Find the correct answers to the following questions.

1. Pili had 36 eggs. She added 22 more eggs. How many eggs did she have in total?
2. Fatu had 51 pencils. She added 19 more pencils. How many pencils did she have in total?



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- | | |
|----|--|
| 3. | My brother has 47 goats. He buys 30 more goats. How many goats does he have in total? |
| 4. | Juma took 60 mangoes and Sara took 37 mangoes to the market. How many mangoes did they take to the market? |
| 5. | Twenty-three girls and 28 boys are singing. How many singers are there? |
| 6. | A class has 55 girls and 25 boys. How many pupils are there? |
| 7. | My sister planted 59 seedlings. My brother planted 32 seedlings. How many seedlings were planted? |
| 8. | Bakari planted 44 maize seeds. Asha planted 45 maize seeds. How many maize seeds were planted? |

Chapter Thirteen

Subtracting numbers not exceeding 99

Numbers can be subtracted horizontally or vertically.

Subtracting numbers horizontally without regrouping

Example $83 - 21 = 62$

Steps

1. Subtract the ones
2. Subtract the tens

$$\begin{array}{r} 83 \\ - 21 \\ \hline \end{array}$$

$$\begin{array}{r} 83 \\ - 21 \\ \hline \end{array}$$

The answer is 62

Exercise 1

Answer the following questions written horizontally.

1. $26 - 20 =$	9. $15 - 3 =$
2. $19 - 12 =$	10. $49 - 24 =$
3. $44 - 11 =$	11. $60 - 40 =$
4. $29 - 24 =$	12. $87 - 15 =$
5. $95 - 5 =$	13. $77 - 6 =$
6. $66 - 60 =$	14. $83 - 70 =$
7. $64 - 24 =$	15. $33 - 22 =$
8. $48 - 7 =$	16. $68 - 21 =$



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Exercise 2

Answer the following questions written horizontally.

1.	$14 - 3 =$	11.	$19 - 9 =$
2.	$21 - 10 =$	12.	$28 - 21 =$
3.	$33 - 32 =$	13.	$11 - 0 =$
4.	$33 - 22 =$	14.	$30 - 10 =$
5.	$48 - 24 =$	15.	$27 - 21 =$
6.	$43 - 12 =$	16.	$19 - 8 =$
7.	$47 - 46 =$	17.	$41 - 31 =$
8.	$50 - 0 =$	18.	$60 - 60 =$
9.	$90 - 40 =$	19.	$61 - 1 =$
10.	$65 - 41 =$	20.	$46 - 40 =$

Subtracting numbers vertically without regrouping

Example

$$\begin{array}{r} 65 \\ - 30 \\ \hline \\ \hline \end{array}$$

Steps

1. Subtract the ones

$$\begin{array}{r|l} 6 & 5 \\ - & 30 \\ \hline & 5 \end{array}$$

2. Subtract the tens

$$\begin{array}{r|l} 6 & 5 \\ - & 30 \\ \hline 3 & 5 \end{array}$$

The answer is 35.

Exercise 3

Answer the following questions written vertically.

1.	$\begin{array}{r} 16 \\ - 3 \\ \hline \\ \hline \end{array}$	5.	$\begin{array}{r} 29 \\ - 11 \\ \hline \\ \hline \end{array}$	9.	$\begin{array}{r} 68 \\ - 8 \\ \hline \\ \hline \end{array}$
2.	$\begin{array}{r} 44 \\ - 22 \\ \hline \\ \hline \end{array}$	6.	$\begin{array}{r} 39 \\ - 15 \\ \hline \\ \hline \end{array}$	10.	$\begin{array}{r} 47 \\ - 24 \\ \hline \\ \hline \end{array}$
3.	$\begin{array}{r} 33 \\ - 21 \\ \hline \\ \hline \end{array}$	7.	$\begin{array}{r} 12 \\ - 10 \\ \hline \\ \hline \end{array}$	11.	$\begin{array}{r} 46 \\ - 15 \\ \hline \\ \hline \end{array}$
4.	$\begin{array}{r} 27 \\ - 14 \\ \hline \\ \hline \end{array}$	8.	$\begin{array}{r} 38 \\ - 4 \\ \hline \\ \hline \end{array}$	12.	$\begin{array}{r} 48 \\ - 28 \\ \hline \\ \hline \end{array}$



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Exercise 4

Answer the following questions written vertically.

1.	$\begin{array}{r} 17 \\ - 4 \\ \hline \end{array}$	7.	$\begin{array}{r} 49 \\ - 18 \\ \hline \end{array}$	13.	$\begin{array}{r} 28 \\ - 18 \\ \hline \end{array}$
2.	$\begin{array}{r} 40 \\ - 10 \\ \hline \end{array}$	8.	$\begin{array}{r} 29 \\ - 8 \\ \hline \end{array}$	14.	$\begin{array}{r} 49 \\ - 15 \\ \hline \end{array}$
3.	$\begin{array}{r} 80 \\ - 60 \\ \hline \end{array}$	9.	$\begin{array}{r} 92 \\ - 1 \\ \hline \end{array}$	15.	$\begin{array}{r} 79 \\ - 34 \\ \hline \end{array}$
4.	$\begin{array}{r} 66 \\ - 30 \\ \hline \end{array}$	10.	$\begin{array}{r} 82 \\ - 52 \\ \hline \end{array}$	16.	$\begin{array}{r} 84 \\ - 70 \\ \hline \end{array}$
5.	$\begin{array}{r} 59 \\ - 19 \\ \hline \end{array}$	11.	$\begin{array}{r} 96 \\ - 81 \\ \hline \end{array}$	17.	$\begin{array}{r} 78 \\ - 45 \\ \hline \end{array}$
6.	$\begin{array}{r} 62 \\ - 32 \\ \hline \end{array}$	12.	$\begin{array}{r} 49 \\ - 20 \\ \hline \end{array}$	18.	$\begin{array}{r} 98 \\ - 60 \\ \hline \end{array}$



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Subtracting numbers horizontally by regrouping

Example 1

$$23 - 19 =$$

Solution

$$23 - 19 = 4$$

Steps

1. Subtract the ones, $3 - 9$ is not sufficient.

$$23 - 19 = \boxed{}$$

not sufficient

2. Take 1 tens from the group of 2 tens and remain with 1 tens. The group of ones become $10 + 3 = 13$.

$$\begin{array}{r} 1 \ 13 \\ \cancel{2}3 - 19 = \end{array} \boxed{} \boxed{}$$

3. Subtract ones, $13 - 9 = 4$. Write 4 in the ones place.

$$\begin{array}{r} 1 \ 13 \\ \cancel{2}3 - 19 = \end{array} \boxed{} \boxed{4}$$

4. Subtract tens, $1 - 1 = 0$. Leave the tens place empty.

$$\begin{array}{r} 1 \ 13 \\ \cancel{2}3 - 19 = \end{array} \boxed{} \boxed{4}$$

The answer is 4



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Example 2

$$80 - 44 =$$

Solution

$$80 - 44 = 36$$

Steps

1. Subtract the ones, but $0 - 4$ is not sufficient.

$$80 - 44 = \boxed{}$$

not sufficient

2. Take 1 tens from the group of 8 tens. You remain with 7 tens. The group of ones become $10 + 0 = 10$.

$$\begin{array}{r} 7 \ 10 \\ \cancel{8}0 - 44 = \end{array} \boxed{} \boxed{}$$

3. Subtract ones, $10 - 4 = 6$. Write 6 in the ones place.

$$\begin{array}{r} 7 \ 10 \\ \cancel{8}0 - 44 = \end{array} \boxed{} \boxed{6}$$

4. Subtract tens, $7 - 4 = 3$. Write 3 in the tens place. Therefore $80 - 44 = 36$.

$$\begin{array}{r} 7 \ 10 \\ \cancel{8}0 - 44 = \end{array} \boxed{3} \boxed{6}$$

Exercise 5

Answer the following questions.

1.	$47 - 18 =$	6.	$33 - 27 =$
2.	$72 - 28 =$	7.	$80 - 8 =$
3.	$52 - 17 =$	8.	$36 - 18 =$
4.	$80 - 12 =$	9.	$54 - 29 =$
5.	$36 - 9 =$	10.	$91 - 33 =$

Exercise 6

Answer the following questions.

1.	$12 - 6 =$	6.	$87 - 29 =$
2.	$17 - 8 =$	7.	$91 - 46 =$
3.	$26 - 9 =$	8.	$70 - 24 =$
4.	$24 - 16 =$	9.	$37 - 9 =$
5.	$40 - 7 =$	10.	$81 - 18 =$



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Subtracting numbers vertically by regrouping

Example

$$\begin{array}{r} 72 \\ - 38 \\ \hline 34 \end{array}$$

Steps

1. Subtract the ones, but $2 - 8$ is not sufficient.

$$\begin{array}{r} 72 \\ - 38 \\ \hline \end{array}$$

2. Take 1 tens from the group of 7 tens. You remain with 6 tens. The group of ones become $10 + 2 = 12$

$$\begin{array}{r} \overset{6}{\cancel{7}} \overset{12}{\cancel{2}} \\ - 38 \\ \hline \end{array}$$

3. Subtract the group of ones, $12 - 8 = 4$. Write 4 in the ones place.

$$\begin{array}{r} \overset{6}{\cancel{7}} \overset{12}{\cancel{2}} \\ - 38 \\ \hline 4 \end{array}$$

4. Subtract tens, $6 - 3 = 3$. Write 3 in the tens place.

$$\begin{array}{r} \overset{6}{\cancel{7}} \overset{12}{\cancel{2}} \\ - 38 \\ \hline 34 \end{array}$$

The answer is 34



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Exercise 7

Answer the following questions written vertically.

1.	$\begin{array}{r} 66 \\ - 47 \\ \hline \\ \hline \end{array}$	7.	$\begin{array}{r} 61 \\ - 45 \\ \hline \\ \hline \end{array}$	13.	$\begin{array}{r} 72 \\ - 33 \\ \hline \\ \hline \end{array}$
2.	$\begin{array}{r} 78 \\ - 59 \\ \hline \\ \hline \end{array}$	8.	$\begin{array}{r} 93 \\ - 84 \\ \hline \\ \hline \end{array}$	14.	$\begin{array}{r} 73 \\ - 65 \\ \hline \\ \hline \end{array}$
3.	$\begin{array}{r} 84 \\ - 45 \\ \hline \\ \hline \end{array}$	9.	$\begin{array}{r} 94 \\ - 37 \\ \hline \\ \hline \end{array}$	15.	$\begin{array}{r} 94 \\ - 27 \\ \hline \\ \hline \end{array}$
4.	$\begin{array}{r} 35 \\ - 18 \\ \hline \\ \hline \end{array}$	10.	$\begin{array}{r} 20 \\ - 12 \\ \hline \\ \hline \end{array}$	16.	$\begin{array}{r} 40 \\ - 8 \\ \hline \\ \hline \end{array}$
5.	$\begin{array}{r} 61 \\ - 19 \\ \hline \\ \hline \end{array}$	11.	$\begin{array}{r} 77 \\ - 38 \\ \hline \\ \hline \end{array}$	17.	$\begin{array}{r} 84 \\ - 19 \\ \hline \\ \hline \end{array}$
6.	$\begin{array}{r} 31 \\ - 18 \\ \hline \\ \hline \end{array}$	12.	$\begin{array}{r} 70 \\ - 25 \\ \hline \\ \hline \end{array}$	18.	$\begin{array}{r} 61 \\ - 28 \\ \hline \\ \hline \end{array}$



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Exercise 8

Answer the following questions.

1.	$\begin{array}{r} 10 \\ - 7 \\ \hline \end{array}$	8.	$\begin{array}{r} 30 \\ - 18 \\ \hline \end{array}$	15.	$\begin{array}{r} 20 \\ - 14 \\ \hline \end{array}$
2.	$\begin{array}{r} 35 \\ - 19 \\ \hline \end{array}$	9.	$\begin{array}{r} 50 \\ - 37 \\ \hline \end{array}$	16.	$\begin{array}{r} 26 \\ - 7 \\ \hline \end{array}$
3.	$\begin{array}{r} 70 \\ - 19 \\ \hline \end{array}$	10.	$\begin{array}{r} 60 \\ - 15 \\ \hline \end{array}$	17.	$\begin{array}{r} 40 \\ - 26 \\ \hline \end{array}$
4.	$\begin{array}{r} 73 \\ - 25 \\ \hline \end{array}$	11.	$\begin{array}{r} 52 \\ - 7 \\ \hline \end{array}$	18.	$\begin{array}{r} 90 \\ - 9 \\ \hline \end{array}$
5.	$\begin{array}{r} 57 \\ - 39 \\ \hline \end{array}$	12.	$\begin{array}{r} 64 \\ - 16 \\ \hline \end{array}$	19.	$\begin{array}{r} 30 \\ - 18 \\ \hline \end{array}$
6.	$\begin{array}{r} 50 \\ - 24 \\ \hline \end{array}$	13.	$\begin{array}{r} 46 \\ - 9 \\ \hline \end{array}$	20.	$\begin{array}{r} 31 \\ - 16 \\ \hline \end{array}$
7.	$\begin{array}{r} 58 \\ - 19 \\ \hline \end{array}$	14.	$\begin{array}{r} 97 \\ - 48 \\ \hline \end{array}$	21.	$\begin{array}{r} 80 \\ - 79 \\ \hline \end{array}$



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Solving word problems by subtracting numbers not exceeding 99

Example

A hen laid 32 eggs. 17 eggs were broken. How many eggs remained?

Solution

$$\begin{array}{r} \overset{2}{3}\overset{12}{2} \text{ eggs} \\ - 17 \text{ eggs} \\ \hline 15 \text{ eggs} \end{array}$$

15 eggs remained.

Exercise 9

Solve the following word problems.

1. Bakari had 31 mangoes. He threw away 12 rotten mangoes. How many mangoes remained?
2. Boni planted 46 seedlings of fruit trees; 26 seedlings withered and died. How many seedlings remained?
3. Neema had 51 dirty cups. She washed 15 cups. How many dirty cups remained?



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4. Doto had 90 bottles of soda. She sold 61 bottles. How many bottles of soda remained?
5. There were 96 bottles of juice in the box. If 47 bottles were sold, how many bottles of juice remained?
6. Saida had 66 oranges. She gave 37 oranges to her sisters. How many oranges remained?
7. Kulwa had 75 pencils. He gave his friend 25 pencils. How many pencils remained?
8. A father had 88 books. He lost 11 books. How many books remained?

Adding and subtracting numbers horizontally

Exercise 10

Write the answer in each of the following.

1.	$12 + 4 =$		15.	$33 - 18 =$	
2.	$19 - 6 =$		16.	$90 + 6 =$	
3.	$26 + 31 =$		17.	$88 - 77 =$	
4.	$58 - 7 =$		18.	$43 + 47 =$	
5.	$16 - 6 =$		19.	$68 + 11 =$	
6.	$24 + 12 =$		20.	$58 + 40 =$	
7.	$80 + 10 =$		21.	$60 + 16 =$	
8.	$26 - 11 =$		22.	$90 - 53 =$	
9.	$92 + 7 =$		23.	$96 - 65 =$	
10.	$95 - 75 =$		24.	$65 + 34 =$	
11.	$21 + 9 =$		25.	$59 + 35 =$	
12.	$34 + 64 =$		26.	$70 - 42 =$	
13.	$95 - 56 =$		27.	$91 - 18 =$	
14.	$79 - 79 =$		28.	$84 - 14 =$	



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Adding and subtracting numbers vertically

Exercise 11

Write the answer in each of the following.

1.

$$\begin{array}{r} 15 \\ + 4 \\ \hline \\ \hline \end{array}$$

5.

$$\begin{array}{r} 17 \\ - 3 \\ \hline \\ \hline \end{array}$$

9.

$$\begin{array}{r} 24 \\ - 13 \\ \hline \\ \hline \end{array}$$

2.

$$\begin{array}{r} 66 \\ + 21 \\ \hline \\ \hline \end{array}$$

6.

$$\begin{array}{r} 33 \\ + 44 \\ \hline \\ \hline \end{array}$$

10.

$$\begin{array}{r} 88 \\ - 10 \\ \hline \\ \hline \end{array}$$

3.

$$\begin{array}{r} 25 \\ - 3 \\ \hline \\ \hline \end{array}$$

7.

$$\begin{array}{r} 51 \\ + 15 \\ \hline \\ \hline \end{array}$$

11.

$$\begin{array}{r} 70 \\ + 28 \\ \hline \\ \hline \end{array}$$

4.

$$\begin{array}{r} 80 \\ + 10 \\ \hline \\ \hline \end{array}$$

8.

$$\begin{array}{r} 59 \\ - 49 \\ \hline \\ \hline \end{array}$$

12.

$$\begin{array}{r} 35 \\ + 43 \\ \hline \\ \hline \end{array}$$



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Exercise 12

Write the answer in each of the following.

1. $\begin{array}{r} 72 \\ - 23 \\ \hline \\ \hline \end{array}$	5. $\begin{array}{r} 35 \\ + 15 \\ \hline \\ \hline \end{array}$	9. $\begin{array}{r} 91 \\ - 63 \\ \hline \\ \hline \end{array}$
2. $\begin{array}{r} 61 \\ + 19 \\ \hline \\ \hline \end{array}$	6. $\begin{array}{r} 90 \\ - 9 \\ \hline \\ \hline \end{array}$	10. $\begin{array}{r} 55 \\ - 38 \\ \hline \\ \hline \end{array}$
3. $\begin{array}{r} 81 \\ - 18 \\ \hline \\ \hline \end{array}$	7. $\begin{array}{r} 30 \\ - 25 \\ \hline \\ \hline \end{array}$	11. $\begin{array}{r} 28 \\ + 65 \\ \hline \\ \hline \end{array}$
4. $\begin{array}{r} 59 \\ + 27 \\ \hline \\ \hline \end{array}$	8. $\begin{array}{r} 88 \\ + 9 \\ \hline \\ \hline \end{array}$	12. $\begin{array}{r} 66 \\ - 27 \\ \hline \\ \hline \end{array}$



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Chapter Fourteen

Recognising fractions

Recognise one half of a whole object

A half is one of two equal pieces which together make a whole object. When an orange is cut into two equal pieces, each piece is called one half.

Example

Read.

Whole object	First Half	Second Half
 An orange	 half an orange	 half an orange
 A pineapple	 half a pineapple	 half a pineapple
 A tomato	 half a tomato	 half a tomato



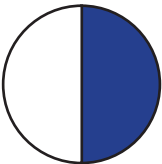
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Writing half or $\frac{1}{2}$

A half is written as $\frac{1}{2}$ and is read as one half or a half.

Exercise 1

Write $\frac{1}{2}$ or a half in the blank spaces.

1.			$\frac{1}{2}$
2.			$\frac{1}{2}$
3.			$\frac{1}{2}$
4.			$\frac{1}{2}$



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5.			half
6.			half
7.			half

Exercise 2

Write **Yes** if the shaded part is a half. Write **No** if the shaded part is not a half.

1.		4.		7.	
2.		5.		8.	
3.		6.		9.	
.....					



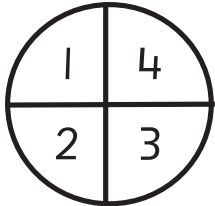
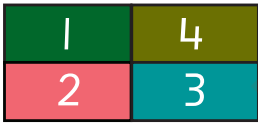
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Recognising a quarter of a whole object

A quarter is one of four equal pieces which together make a whole object. When an orange is cut into four equal pieces, each piece is called a quarter of the orange. A quarter is written as $\frac{1}{4}$.

Example

Read.

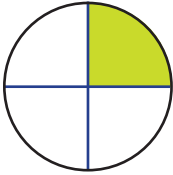
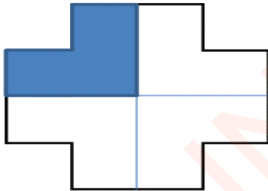
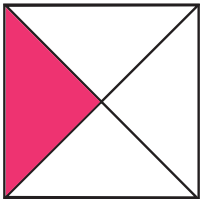
Whole object	Quarter	Quarter	Quarter	Quarter
 Whole circle	 quarter of a circle	 quarter of a circle	 quarter of a circle	 quarter of a circle
 Whole rectangle	 quarter of a rectangle	 quarter of a rectangle	 quarter of a rectangle	 quarter of a rectangle
 Whole circle	 quarter of a circle	 quarter of a circle	 quarter of a circle	 quarter of a circle



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Exercise 3

Write the word 'quarter' or $\frac{1}{4}$ in the given blank space.

1.		quarter	$\frac{1}{4}$
2.			$\frac{1}{4}$
3.		quarter	
4.		quarter	
5.			$\frac{1}{4}$





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Exercise 4

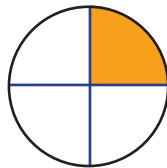
Write $\frac{1}{2}$ or $\frac{1}{4}$ for the shaded parts.

1.



.....

4.



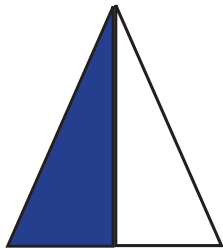
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7.



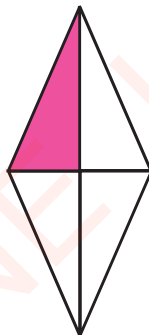
.....

2.



.....

5.



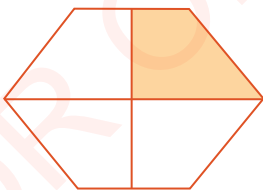
.....

8.



.....

3.



.....

6.



.....

9.



.....



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Chapter Fifteen

The Tanzanian currency

Recognising Tanzanian coins

A currency is a common medium of exchange. The Tanzanian currency is called the shilling. It is in two forms, which are banknotes and coins.

Exercise I

Each coin has two sides. Study the following coins and read their values.

1.



50 shillings

2.



100 shillings



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Writing the values of the Tanzanian shilling coins

Exercise 2

Write the value of each coin below.

1.



..... shillings coin

2.



..... shillings coin

Exercise 3

Draw lines to match the coins of the same value.

1.



2.





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Adding money amounts horizontally

Examples

1. 10 shillings **plus** 20 shillings **totals** 30 shillings.
2. 25 shillings **plus** 15 shillings **totals** 40 shillings.

Exercise 4

Write the total amounts in the spaces provided.

- | | |
|----|---|
| 1. | 5 shillings plus 50 shillings totals ____ shillings. |
| 2. | 50 shillings plus 20 shillings totals ____ shillings. |
| 3. | 50 shillings plus 48 shillings totals ____ shillings. |
| 4. | 20 shillings plus 5 shillings totals ____ shillings. |
| 5. | 50 shillings plus 10 shillings totals ____ shillings. |
| 6. | 15 shillings plus 20 shillings totals ____ shillings. |
| 7. | 5 shillings plus 20 shillings totals ____ shillings. |
| 8. | 10 shillings plus 5 shillings totals ____ shillings. |

Exercise 5

Add the following money amounts horizontally.

- | | |
|----|-------------------------------|
| 1. | 50 shillings + 45 shillings = |
| 2. | 15 shillings + 20 shillings = |

3.	35 shillings + 40 shillings =
4.	5 shillings + 10 shillings =
5.	25 shillings + 30 shillings =
6.	10 shillings + 15 shillings =
7.	13 shillings + 17 shillings =
8.	30 shillings + 13 shillings =
9.	40 shillings + 53 shillings =
10.	20 shillings + 10 shillings =

Adding money amounts vertically

Example 1

$$\begin{array}{r} 15 \text{ shillings} \\ + 50 \text{ shillings} \\ \hline 65 \text{ shillings} \end{array}$$

Example 2

$$\begin{array}{r} 20 \text{ shillings} \\ + 30 \text{ shillings} \\ \hline 50 \text{ shillings} \end{array}$$

Exercise 6

Write the total amount of shillings in each of the following.

1.	5 shillings + 5 shillings shillings	2.	20 shillings + 10 shillings shillings	3.	20 shillings + 50 shillings shillings
----	---	----	---	----	---

4.	10 shillings + 50 shillings shillings	5.	10 shillings + 10 shillings shillings	6.	20 shillings + 20 shillings shillings
----	---	----	---	----	---

Exercise 7

Add the following money amounts vertically.

1.	50 shillings + 35 shillings shillings	2.	55 shillings + 15 shillings shillings	3.	45 shillings + 20 shillings shillings
4.	20 shillings + 20 shillings shillings	5.	30 shillings + 20 shillings shillings	6.	35 shillings + 10 shillings shillings

Subtracting money amounts

Examples

1. 50 shillings **minus** 10 shillings **remains** 40 shillings.

That is, 50 shillings – 10 shillings = 40 shillings.

2. 80 shillings **minus** 50 shillings **remains** 30 shillings.

That is, 80 shillings – 50 shillings = 30 shillings.

Exercise 8

Write the answer in the space provided.

1.	50 shillings minus 5 shillings remains ____ shillings.
2.	10 shillings minus 5 shillings remains ____ shillings.
3.	20 shillings minus 5 shillings remains ____ shillings.
4.	5 shillings minus 5 shillings remains ____ shillings.
5.	20 shillings minus 10 shillings remains ____ shillings.
6.	50 shillings minus 10 shillings remains ____ shillings.
7.	50 shillings minus 50 shillings remains ____ shillings.
8.	40 shillings minus 5 shillings remains ____ shillings.
9.	60 shillings minus 20 shillings remains ____ shillings.
10.	75 shillings minus 45 shillings remains ____ shillings.

Exercise 9

Answer each of the following.

1.	70 shillings – 45 shillings =
2.	55 shillings – 30 shillings =
3.	40 shillings – 10 shillings =



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4.	65 shillings – 10 shillings =
5.	20 shillings – 5 shillings =
6.	82 shillings – 31 shillings =
7.	43 shillings – 10 shillings =
8.	30 shillings – 15 shillings =
9.	45 shillings – 40 shillings =
10.	20 shillings – 5 shillings =

Exercise 10

Write the answer in the space provided.

1.	40 shillings – 10 shillings shillings	4.	85 shillings – 40 shillings shillings	7.	24 shillings – 2 shillings shillings
2.	35 shillings – 25 shillings shillings	5.	90 shillings – 5 shillings shillings	8.	85 shillings – 20 shillings shillings
3.	70 shillings – 35 shillings shillings	6.	72 shillings – 12 shillings shillings	9.	50 shillings – 25 shillings shillings

Chapter Sixteen

Recognising measurements

Times of the day

Times of the day are morning, afternoon, evening and night. Usually, these times are determined by the activities done throughout the day.

Exercise I

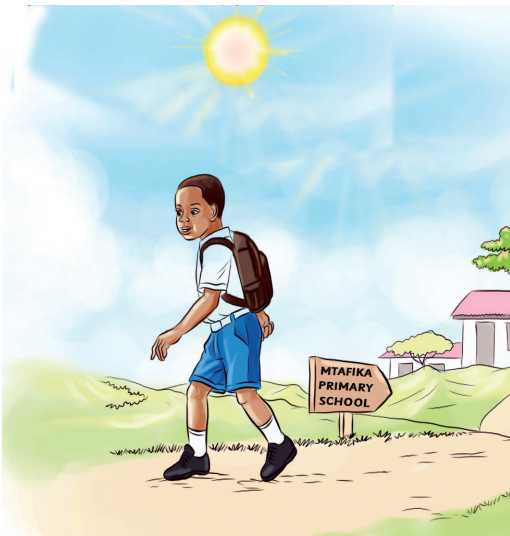
Study the pictures. Read aloud the sentences to learn times of the day.



I go to school in the morning.



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I go home after school
in the afternoon.



I do my homework in the
evening.



I sleep during the night.



Exercise 2

Read aloud the following sentences.

1. I take breakfast in the morning.
2. I take dinner in the evening.
3. I sleep during the night.
4. I take lunch in the afternoon.

Exercise 3

For each event, write the time of the day the event happens.

Event	Time
1. Waking up	
2. Taking breakfast	
3. Sleeping	
4. Taking lunch	
5. Brushing teeth	
6. Taking dinner	

Exercise 4

Fill in each blank space with the correct word in brackets.

(morning, evening, afternoon, night)

1. People go to sleep during the _____.
2. Breakfast is taken in the _____.



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3. I wake up in the _____.
4. Dinner is taken in the _____.
5. People take lunch in the _____.

Distance

Distance indicates how close or far two objects are separated. When the distance is short, the objects are close to each other. When the distance is long, the objects are far from each other.

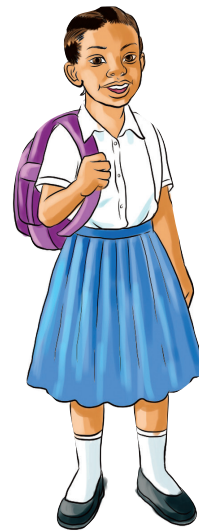
Exercise 5

Observe these pictures and read the text below.



Musa

Ana



Tatu

Ana is close to Musa.

Ana and Musa are far from Tatu.

Exercise 6

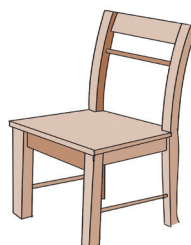
Fill in the space with the word **close** or **far**



ball



flask



chair

1. The ball is _____ to the flask.
2. The ball is _____ from the chair.
3. The chair is _____ from the ball.
4. The chair is _____ from the flask.

Exercise 7

Look at the pictures. Fill in the blanks with the correct word.



pen



cup



book

1. The book is close to the _____.
2. The book is far from the _____.
3. Which object is far from the cup? The _____.



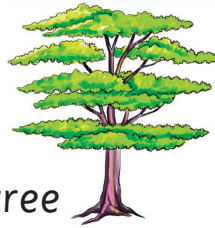
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Study the following pictures and answer the questions that follow.

ball



tree



table



4. The table is close to the _____.

5. Which object is far from the table? The _____.

Length

Length can be measured horizontally or vertically. A vertical length is called height. We can identify objects with similar or different lengths. One object can be longer or shorter than another.

Example

Study the following pictures and read the sentences below.



The pencils have the same length.



The pencils have different lengths.



The hoes have the same length.



The hoes have different lengths.



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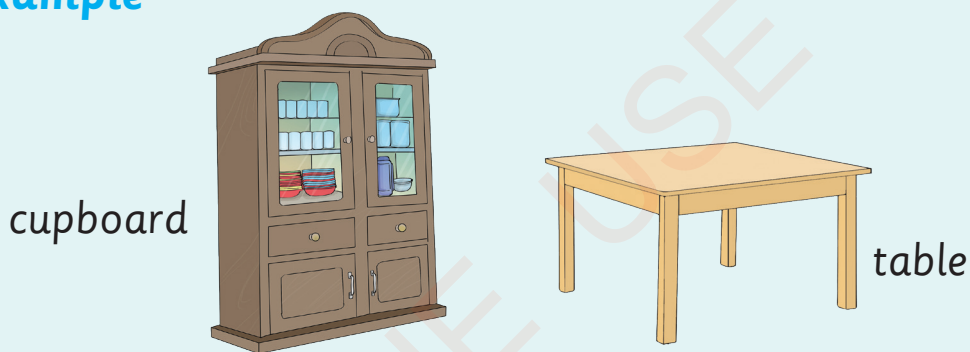
Activity 1

1. Collect rulers, pens, pencils, and pieces of chalk in your class.
2. Put the objects side by side. Say which ones are longer than the others.

Comparing heights

One object can be taller or shorter than another object.

Example



The cupboard is taller than the table.

Exercise 8

Fill in the blanks with the word taller or shorter.

1.

broom



mop



The mop is..... than the broom.



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2.

cup



flask

The cup is..... than the flask.

3.

tank



bucket

The tank is..... than the bucket.

4.

ruler



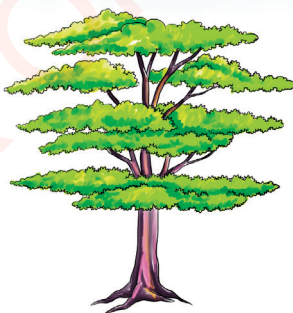
pen



The pen is..... than the ruler.

5.

tree



chair



The tree is..... than the chair.

6.

cup



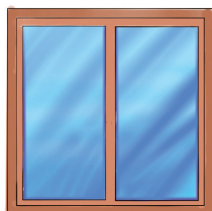
bottle



The bottle is..... than the cup.

7.

window



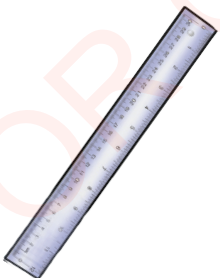
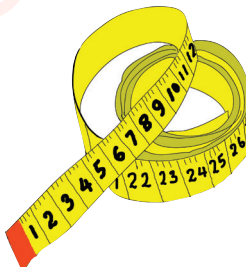
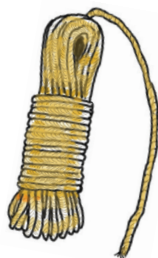
door



The window is..... than the door.

Tools for measuring length

There are standard and non standard tools for measuring length.

Standard tools	Non-standard tools
 ruler	 tape measure
	 steps
	 rope



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Activity 2

1. Count the number of steps from the door to your desk.
2. How many steps did you get?

Comparing Mass

Mass shows how heavy an object is. An object can be heavier or lighter than another.

Example

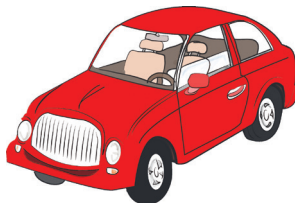


The brick is heavier than the bottle.

Exercise 9

Fill in the blanks using the word 'heavier' or 'lighter'.

car



motorcycle

The car is..... than the motorcycle.



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hoe



spoon

The spoon is..... than the hoe.

rat



cat

The cat is..... than the rat.

pineapple



orange

The pineapple is..... than the orange.

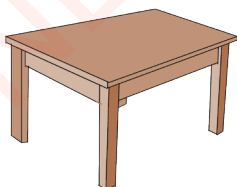
goat



cow

The goat is..... than the cow.

table



chair

The table is..... than the chair.

banana



pawpaw

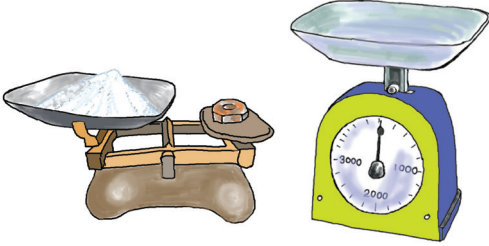
The banana is..... than the pawpaw.



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Tools for measuring mass

Tools for measuring mass can be grouped into standard and non-standard ones.

Standard tools	Non-standard tools
 Beam balance kitchen scale	 hands sacks

Comparing volumes

Volume is the amount of space that an object occupies. The capacity of a container is its ability to hold something. The containers we use at home have different volumes.

Example

A cup has smaller volume than a bucket.





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Exercise 10

For each pair, write the name of the item with smaller volume.

flask



bucket

jug



glass

bowl



pan

cup



Kettle

bucket



tank



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bucket



bottle



tank



pot



Tools for measuring volume

Exercise 11

Study the pictures of the tools for measuring volume. Read the name of each tool.

Standard tools	Non-standard tools
measuring cylinder beaker	bucket jug



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Chapter Seventeen

Recognising plane figures

Identifying plane figures

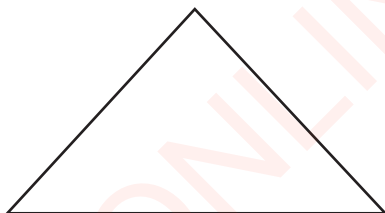
Plane figures are flat and closed shapes.

Examples

Triangles, rectangles, squares, circles, and ovals

Exercise 1

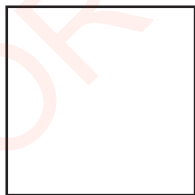
Study the plane figures and read their names.



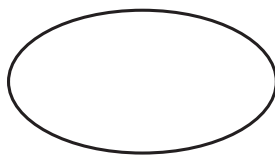
triangle



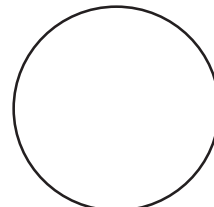
rectangle



square



oval



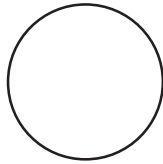
circle

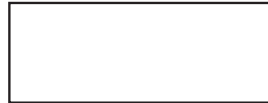


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Exercise 2

Write the name of the plane figure in the space provided.

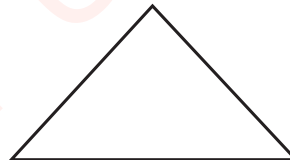


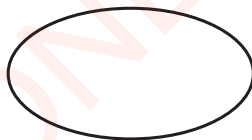


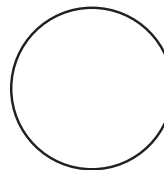


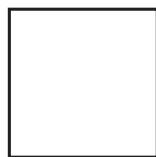


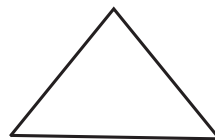














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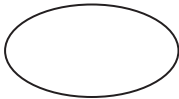
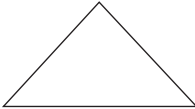
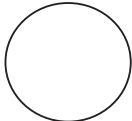
Exercise 3

Draw the following figures.

1.	Circle	
2.	Square	
3.	Rectangle	
4.	Triangle	
5.	Oval	

Exercise 4

Use a line to match each figure with its name.

1.	Triangle	
2.	Circle	
3.	Rectangle	
4.	Square	
5.	Oval	

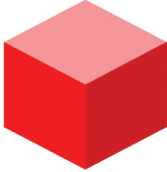
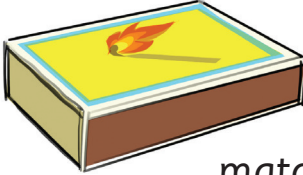


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Non-plane figures

These are figures which have length, width, and thickness. Non-plane figures have volumes.

Example

Non-plane figures	Real objects
 sphere	 ball
 cube	 dice
 cone	 cone
 cylinder	 tank
 prism	 match box



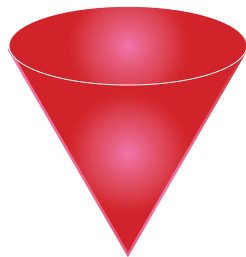
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Exercise 5

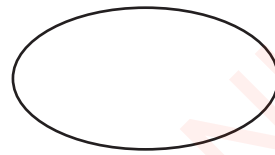
Study these figures and answer the questions that follow.



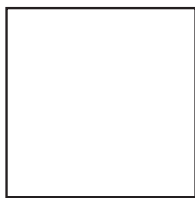
a



b



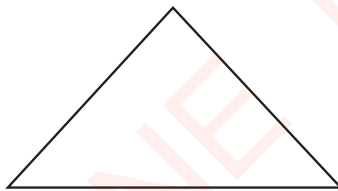
c



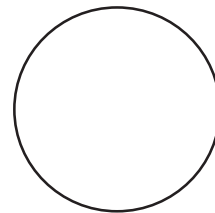
d



f



e



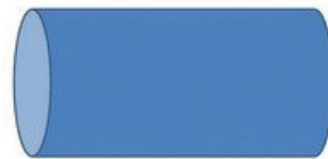
g



h



i



j

1. Write the letters of all plane figures.
2. Write the letters of all non-plane figures.



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Chapter Eighteen

Collecting and listing objects

Common objects in our environment

Our environment consists of different objects. Some objects can be collected, arranged, and named.

Examples



bottle tops



sticks



match sticks



bananas



maize seeds



flowers



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Activity

1. Collect objects such as tree leaves, small stones, bottle covers, and fruits from your school surroundings.
2. Arrange the objects that look alike in one group.
3. Write the names of the objects that you have collected.
4. Count all similar objects.

Exercise I

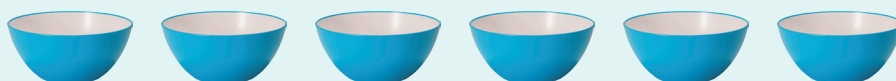
Draw five pictures of four different objects that you know.

Examples

1. Flowers



2. Bowls

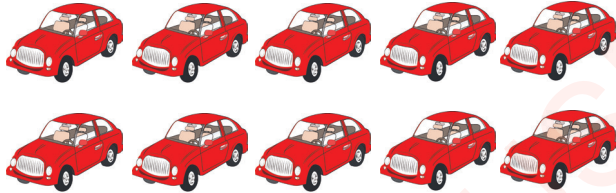




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Exercise 2

Count the objects and write their names and their totals.

	Objects	Name	Total
1.			
2.			
3.			
4.			
5.			





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Revision

Test I

Write the following numbers in words.

1. 5 _____

2. 16 _____

Fill in the blanks.

3. 1, 2, 3, , 5, 6.

4. 10, 20, 30, 40, , , 70

5. $5 + 3 =$

6. $8 + 2 =$

7. $3 + 6 + 0 =$

8.
$$\begin{array}{r} 7 \\ + 3 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 20 \\ + 18 \\ \hline \end{array}$$

10. $13 - 7 =$

11. $9 - 5 =$

12.
$$\begin{array}{r} 8 \\ - 6 \\ \hline \end{array}$$

13.
$$\begin{array}{r} 65 \\ - 41 \\ \hline \end{array}$$

14. $83 + 9 =$

15. $6 + 18 =$

16.
$$\begin{array}{r} 28 \\ + 3 \\ \hline \end{array}$$

17.
$$\begin{array}{r} 63 \\ + 24 \\ \hline \end{array}$$

18. $30 - 25 =$

19.
$$\begin{array}{r} 85 \\ + 12 \\ \hline \end{array}$$

20.
$$\begin{array}{r} 54 \\ + 38 \\ \hline \end{array}$$



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Test 2

Write the following numbers in words.

1. 16 _____
2. 47 _____
3. 69 _____

Write answers in the spaces provided.

4. $82 + 0 = \square$
5. $31 + 4 = \square$
6. $48 - 18 = \square$
7. $87 - 49 = \square$

8.
$$\begin{array}{r} 79 \\ + 12 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 68 \\ - 29 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 64 \\ + 16 \\ \hline \end{array}$$

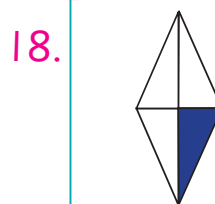
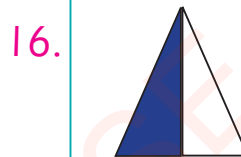
11.
$$\begin{array}{r} 54 \\ - 11 \\ \hline \end{array}$$

12. 60 shillings + 30 shillings = _____ shillings.

Write the following numbers in numerals.

13. Ninety-nine _____
14. Eighty-eight _____
15. Twenty-seven _____

Write in words the fraction shown by the following shaded parts



Answer the following questions.

19. What is the name of this figure?



20. Which is taller than the other between a door and a chair? _____.



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Test 3

Write the missing numbers

1. 3, 4, 5, , 7, , 9

Write ones and tens

	tens	ones
2.	26	
3.	9	
4.	61	
5.	93	

Fill in the blanks.

6. $35 - 31 = \square$

7. $72 + 19 = \square$

8. $26 - 6 = \square$

9. $48 - 21 = \square$

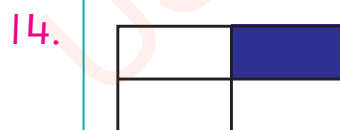
10.
$$\begin{array}{r} 34 \\ + 25 \\ \hline \hline \end{array}$$

11.
$$\begin{array}{r} 76 \\ + 9 \\ \hline \hline \end{array}$$

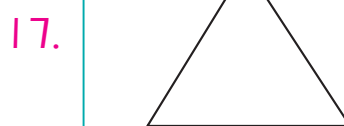
12.
$$\begin{array}{r} 86 \\ - 46 \\ \hline \hline \end{array}$$

13.
$$\begin{array}{r} 43 \\ + 25 \\ \hline \hline \end{array}$$

Write in numerals the fraction represented by the shaded parts.



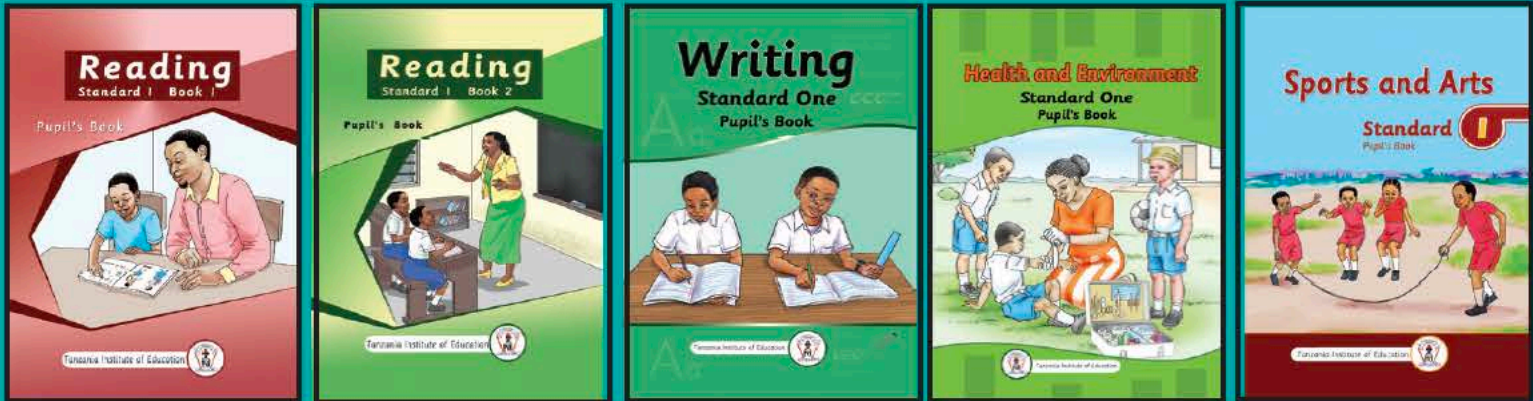
Write the name of this figure.



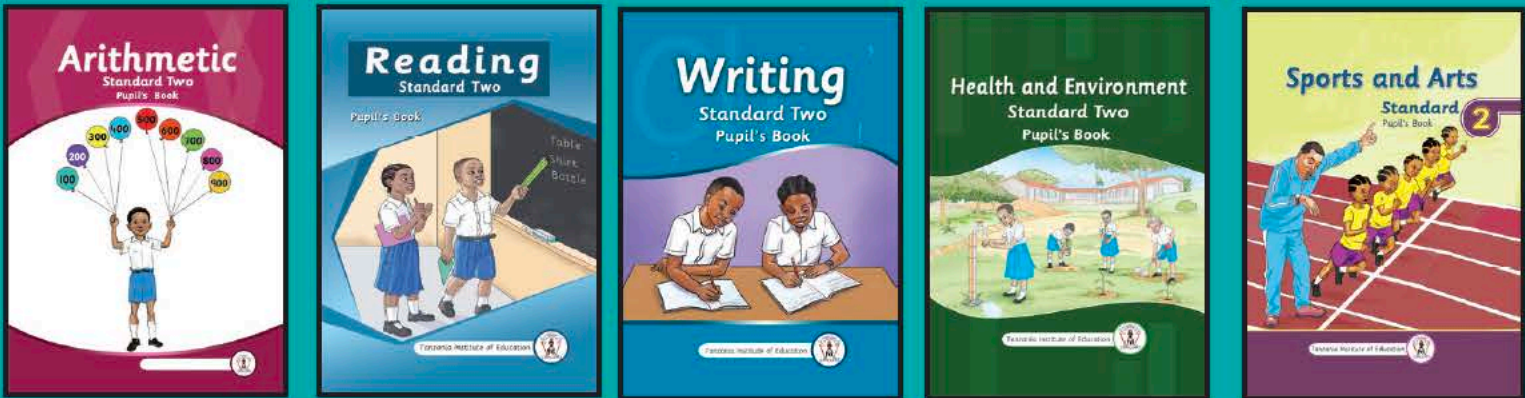
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