New

Perfect Composite Mathematics

Including Activity Worksheets

CLASS – I

[In accordance with the latest NCF prepared by the NCERT, New Delhi]

SPECIAL EDITION FOR ARMY SCHOOLS

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Web support available at
APC PLUS
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ARYA PUBLISHING COMPANY
VILLAGE JOHRON, TRILOKPUR ROAD, KALA AMB 173 030, DISTT. SIRMOUR (HP)
Delhi Office: **1002 Faiz Road (opp. Hanumanji Murti), Karol Bagh, New Delhi 110005**

APC BOOKS

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Published by:
ARYA PUBLISHING COMPANY
Village Johron, Trilokpur Road
Kala Amb 173 030, Distt. Sirmour (HP)

Delhi Office:
1002 Faiz Road (opp. Hanumanji Murti)
Karol Bagh, New Delhi 110 005 (India)
Phone: 011-28752604, 28752745
Fax: 011-28756921
Email: info@apcbooks.co.in
Website: www.apcbooks.co.in

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ISBN-978-81-8296-442-6
ISBN-978-81-8296-450-1 (Set)

First Edition: 2013
Reprint: 2014
Second Edition: 2015
Reprint: 2016, 17, 18
Special Edition: 2018
Special Edition: 2019
Modified Edition: 2020

Price: ₹ 135.00
[For Army Schools]

Illustrations
Gautam Roy

Typeset & Designed at:
Laser Tech Prints (D)

Printed at:
Delite Press
Okhla Industrial Area, Delhi

APC BOOKS

Preface

This book is one from the series New Perfect Composite Mathematics and is based on the syllabus developed by the National Council of Educational Research and Training (NCERT), New Delhi.

The subject matter is produced in such a way that it relates to the environment and focuses on the development and understanding of the students. It also aims to improve their thinking and reasoning skills. All books in this series are activity based and are written in a simple language.

The subject matter has been presented in graded form. The age, the learning ability and the mathematical difficulties faced by the students at all levels have been kept in mind while presenting difficult concepts.

The syllabus includes the four fundamental operations, namely, addition, subtraction, multiplication and division. These operations have been dealt in a step-by-step approach to enable students understand exactly what is to be done. The traditional and stereotype questions have been avoided.

Salient Features of this book are:

- The book covers the entire prescribed syllabus.
- Numbers up to 100 have been introduced by observing and counting objects.
- Focus has been on counting of objects and making their collections to explain the concept of ones and tens.
- Addition and subtraction of 2-digit numbers without regrouping (carrying) and without decomposing (borrowing) have been taught.
- Concept of a multiplication has been explained by means of multiplication tables.
- Mental problems, wherever possible, have been incorporated to enhance the thinking power of the tiny tots.
- The introduction of length, weight, money and time has been done by means of examples from daily life situations and illustrated through attractive pictures.
- 2-D and 3-D figures have been introduced.
- Due care has been taken to present data handling topic by taking simple and interesting examples for students of this age group.
- Patterns in numbers and shapes have also been included.
- **Questions in the form of quizzes and puzzles** have been given to avoid stereotype questions.
- To avoid the stress of examination, question papers have been replaced by introducing **Activity Worksheets**.
- Challenging problems under the heading **Challenge** have also been included.

The books of the series will surely prove to be useful for the students.

I am thankful to the teachers for adopting our books and encouraging us to bring out the new edition.

I would like to thank Mrs. Sunita Jai Singh and Mrs. Shuchi Goyal for their valuable suggestions which helped me in bringing the series in the present form.

Last but not the least, I am thankful to the publishers who have taken great pains in making the books reader-friendly.

Suggestions for further improvement of the series will be gratefully acknowledged.

AUTHOR

APC BOOKS

APC BOOKS

Contents

APC BOOKS

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1. Pre-Number Concepts – Part 1

Bigger – Smaller

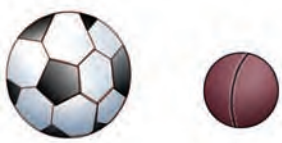
Bigger

Smaller

Smaller

Bigger

Tick (✓) the smaller object.

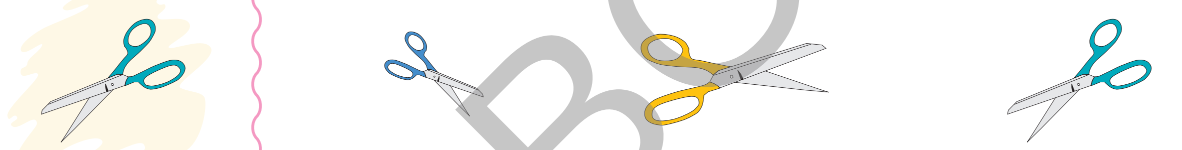


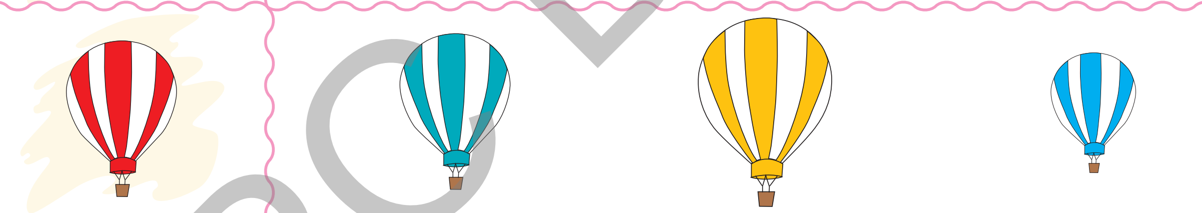
APC BOOKS

Bigger – Of the Same Size – Smaller

Bigger | Of the same size | Smaller

Compare with the object on the left. Tick (✓) the bigger object and cross (✗) the smaller object.

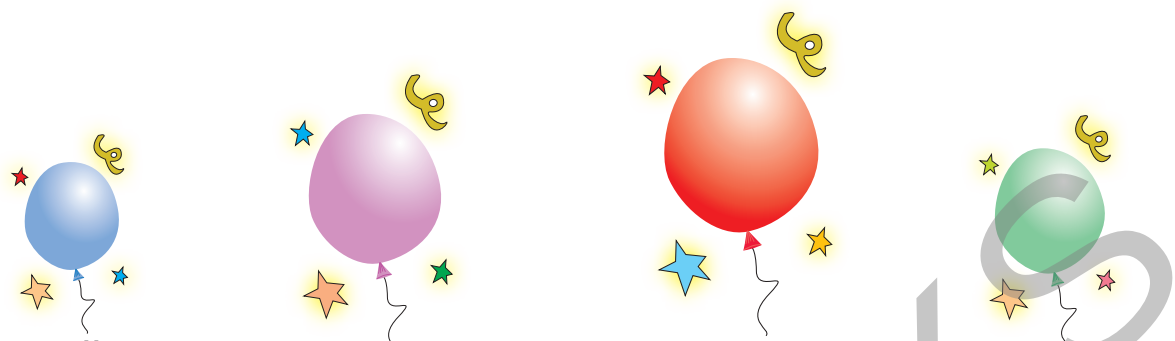




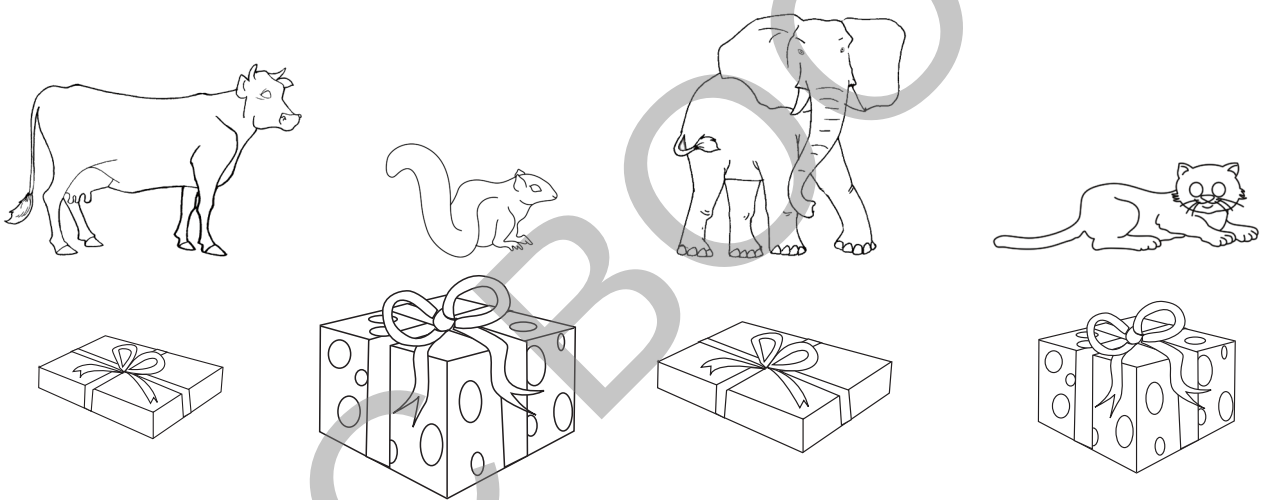
To the teacher: It helps to compare bigger and smaller objects and identify the similar size object.

APC BOOKS

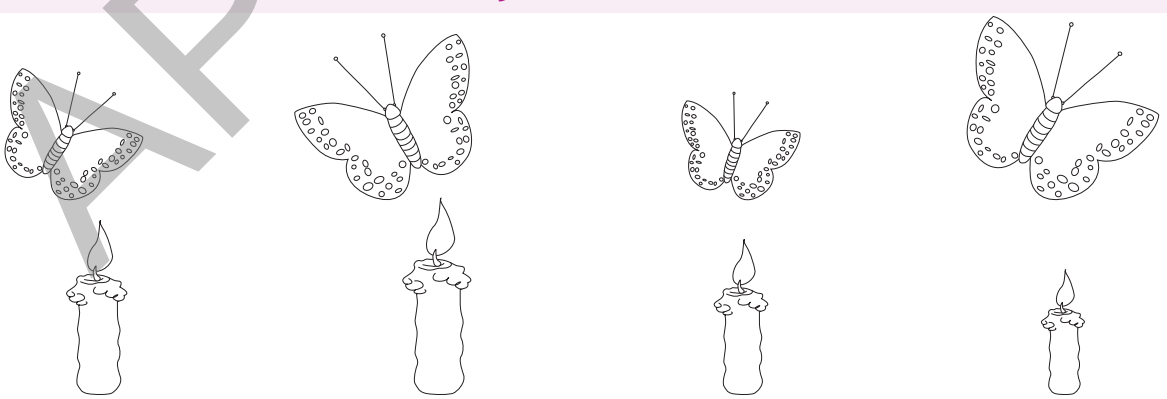
Biggest – Smallest



Colour red the biggest object.



Colour blue the smallest object.

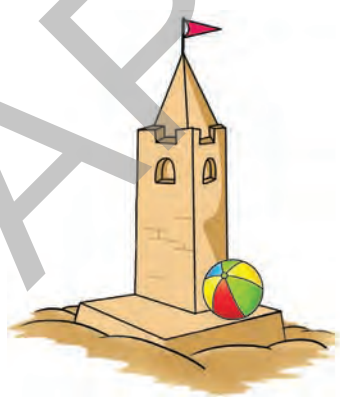


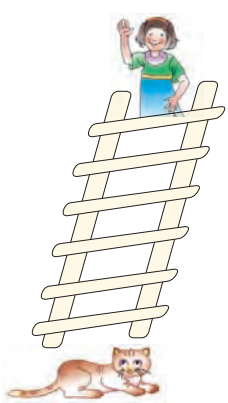
To the teacher: It helps to compare the size of more than three objects.

APC BOOKS

Top – Bottom

Tick (✓) the object on the top and cross (✗) the object at the bottom.



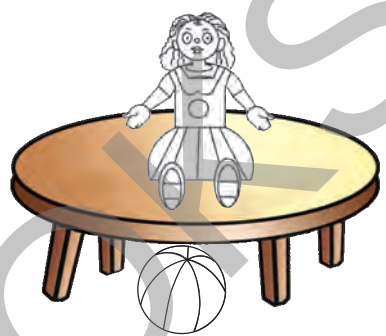


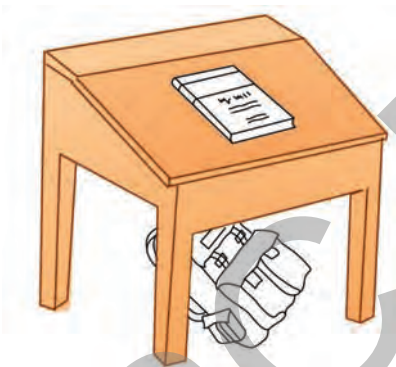
ABC BOOKS

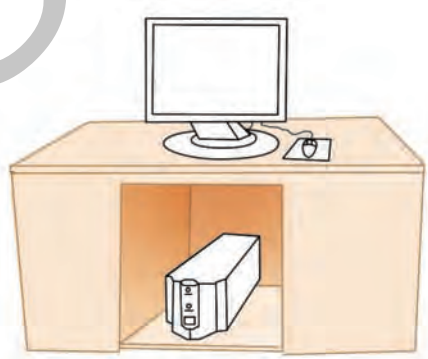
To the teacher: This lesson gives the spatial relationship of two objects.

On – Under

Colour green the object which is on and colour blue the object which is under. First one is done for you.







To the teacher: The teacher should call a student and ask him to put a book on the table and then a pen under the table. This may be repeated with different students.

ABC BOOKS

Inside – Outside

Tick (✓) the inside object and cross (✗) the outside object.

To the teacher: This lesson gives the spatial relationship of two objects.

APC BOOKS

Above – Below

This is Nakul's house.
An aeroplane is flying above the roof level.
A horse is tied below the roof level.

Colour green all objects above the roof level.
Colour brown all objects below the roof level.

APC BOOKS

To the teacher: This lesson gives the spatial relationship of two objects.

Right – Left

I am Nikita.

This is my **right** hand.

This is my **left** hand.

Write L for left and R for right part.


hand


hand


hand


hand


eye


eye


eye


eye


hand


hand


hand


hand

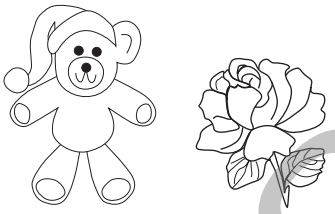
To the teacher: The teacher can demonstrate her right and left hands.

APC BOOKS

Activity Worksheet 1

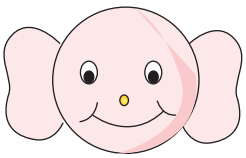
(Use of shapes and figures)

1. Colour blue the bigger and red the smaller object.



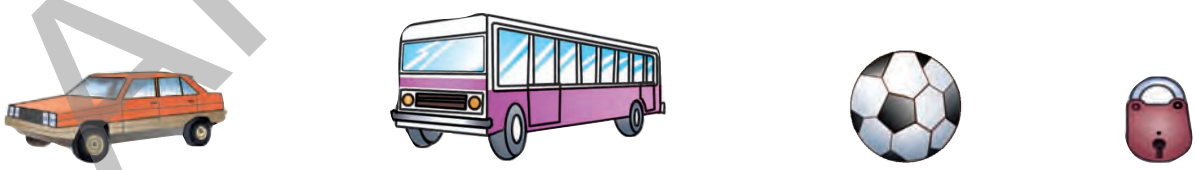
2. Colour blue the object on the top and red the object at the bottom.

3. (a) Tick (✓) the right ear and cross (✗) the left ear.

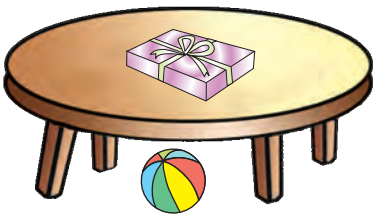


(b) Colour pink the object on the right and blue the object on the left.

4. Cross (✗) the biggest and tick (✓) the smallest object.



5. Tick (✓) the object on the table and cross (✗) the object under the table.



APC BOOKS

2. Numbers 1 to 10

Counting Objects in a Collection

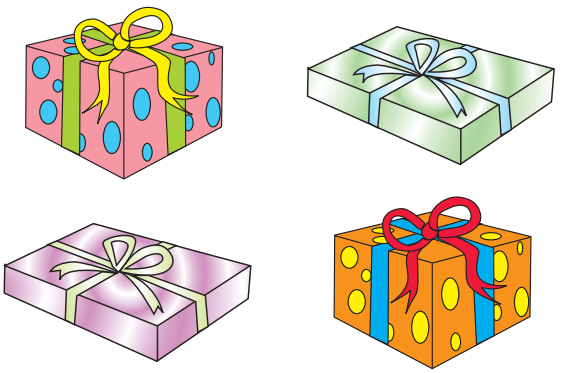
One
1

Two
2

Three
3

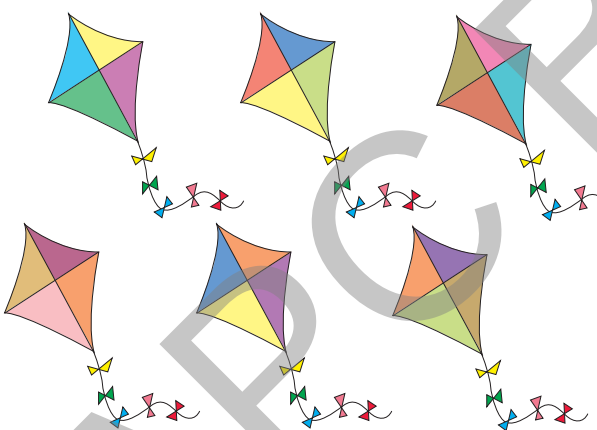
ARC BOOKS

To the teacher: Give sufficient practice to the students in the recognition of numbers through different surrounding objects.

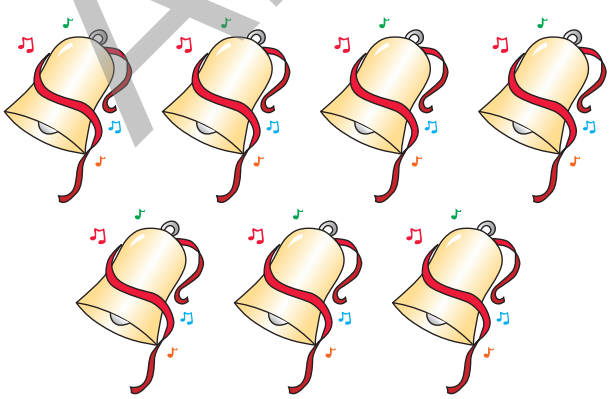


Four
4

Five
5

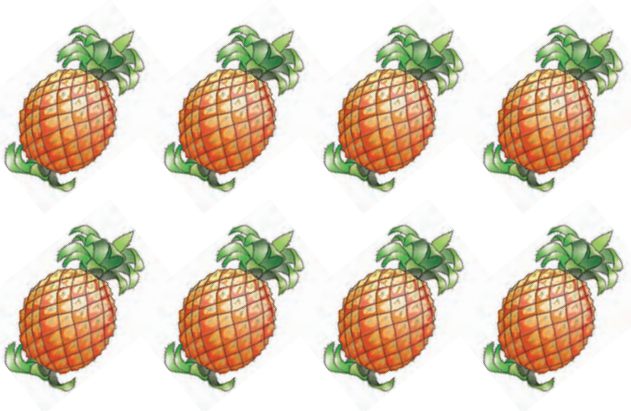


Six
6



Seven
7

APC BOOKS



Eight
8

Nine
9

APC BOOKS

Write the following:

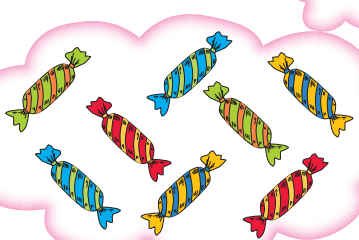
1 2 3 4 5

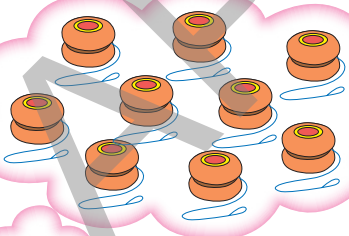
6 7 8 9

Counting and Writing Numbers (1–9)

Count the objects and write the corresponding number in the space provided.

1





APC BOOKS

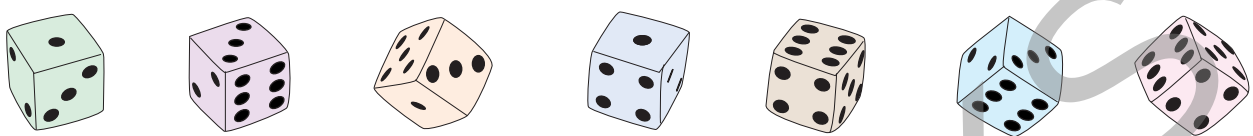
FUN TIME

From the picture count the different objects and write the number.

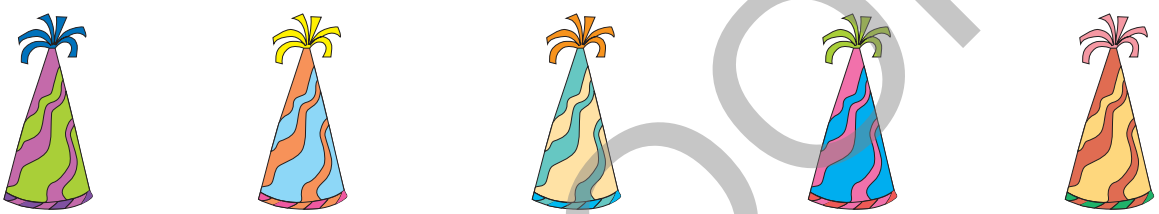
APC BOOKS

Recognition of Numbers (1–9)

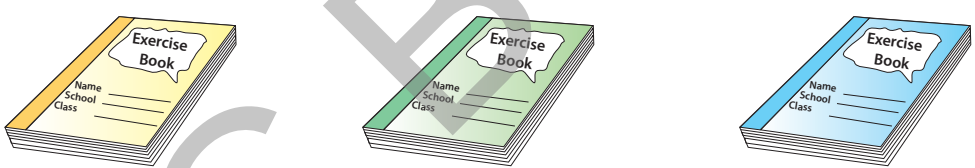
Count the objects and encircle the correct number.



5 7 9

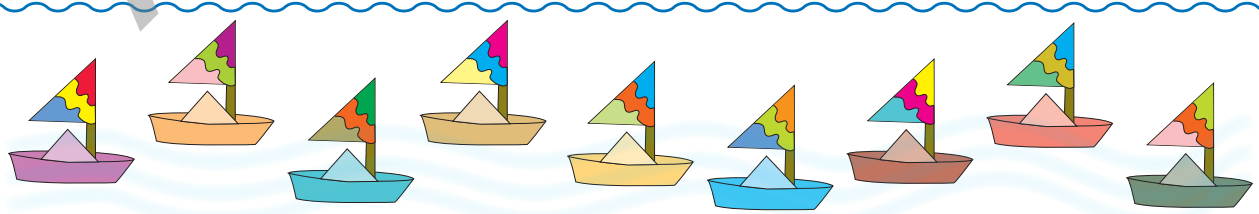


5 3 8



4 6 3

8 1 2

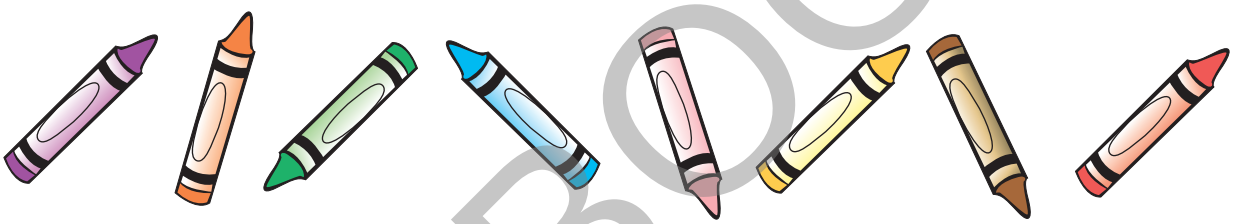


9 5 6

APC BOOKS

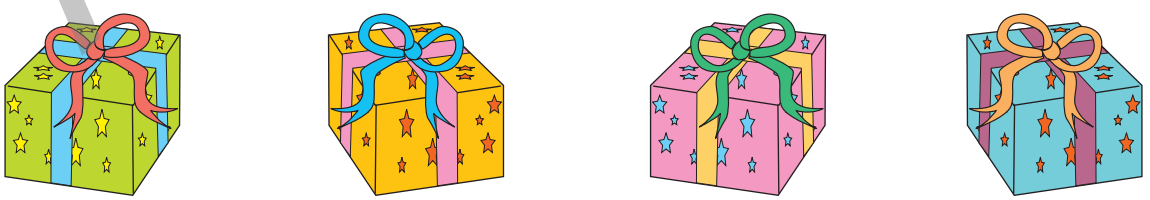
2 4 3

3 4 7



9 7 8

6 5 7



3 6 4

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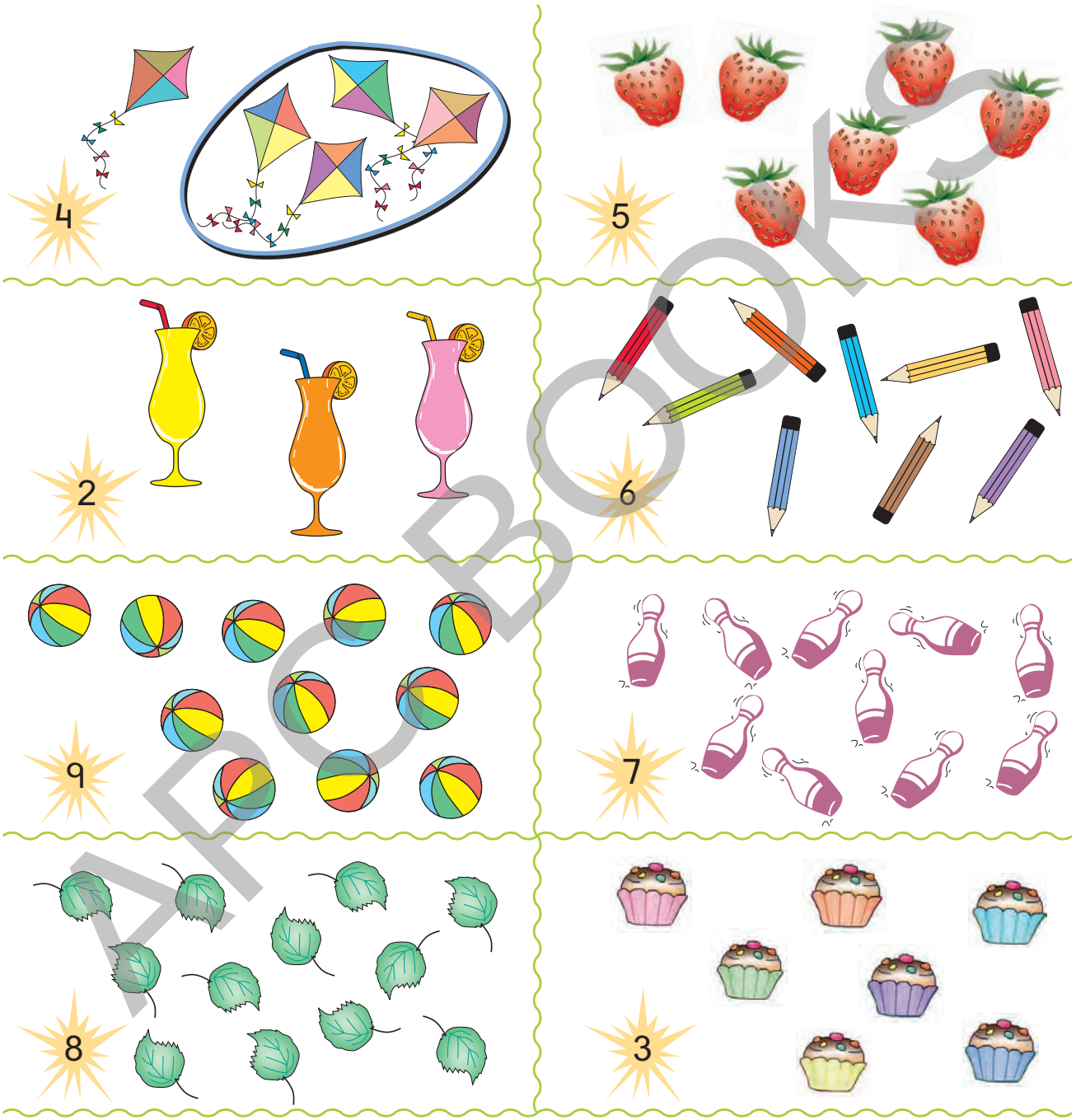
Making Collections

Encircle the objects. The number tells you how many.



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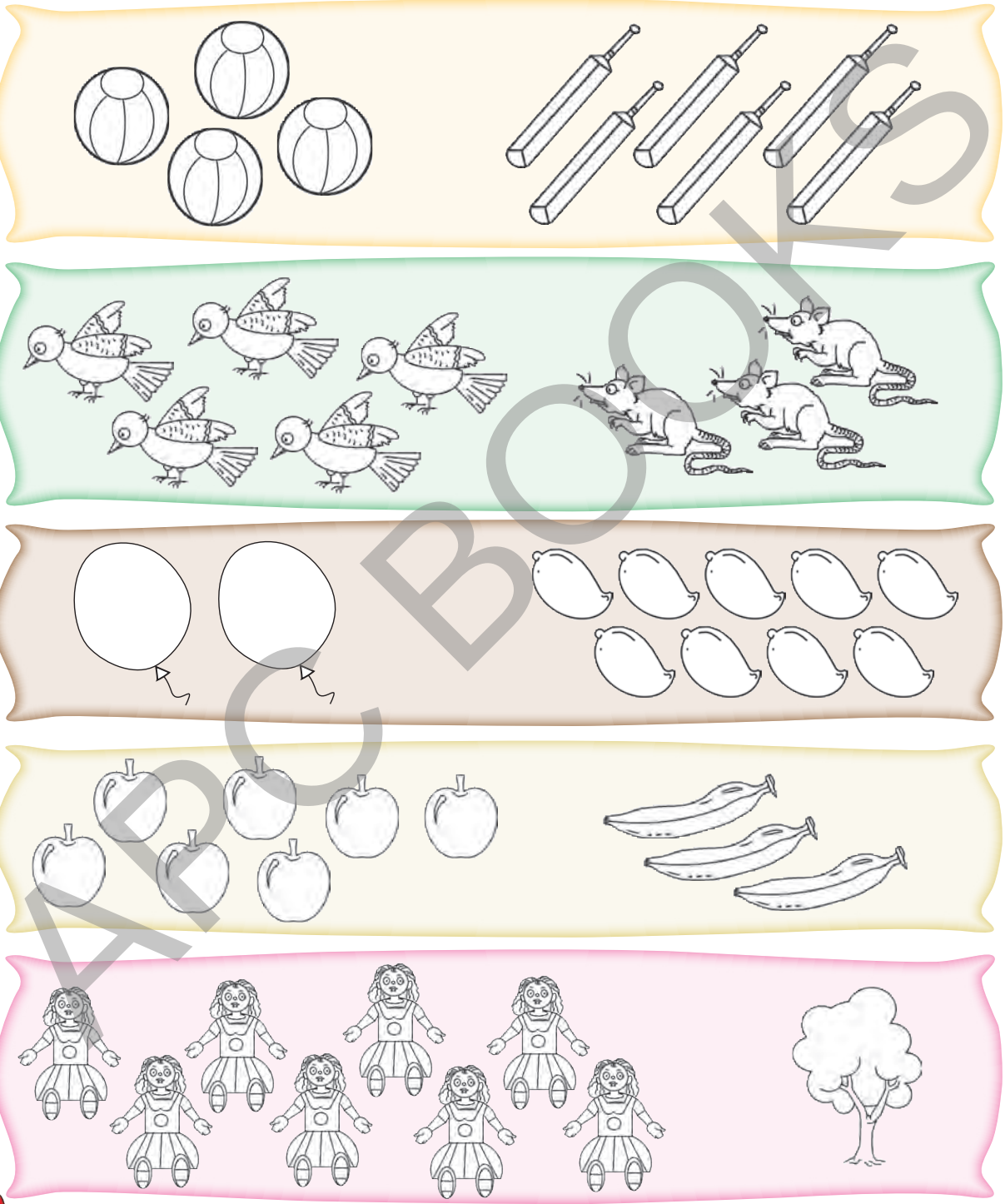
To the teacher: This lesson encourages students to count and form collection.



Activity Worksheet 2

(Counting up to 9)

Count and colour the collection which has less objects.



ABC BOOKS

To the teacher: Ask the students to count and then colour as they like.

The Number 'Zero'

3 boys are playing.
One of them runs away.
Count and tell how many are left.

2

One more runs away.
Count and tell how many are left now.

1

This boy also runs away.
How many are left now?

None

None is written as 0.
'0' is read as 'Zero'.

2 birds | Both the birds fly away | Now 0 bird left

Number of girls on swing is zero

Number of girls on swing is one

Number 1 comes after number 0.

To the teacher: You may tell the students that one comes after zero.

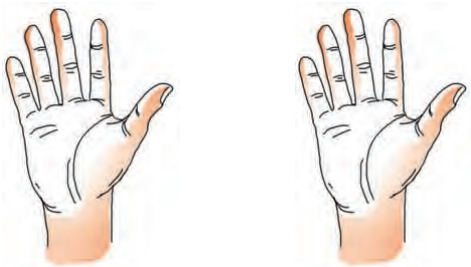
APC BOOKS

The Number 'Ten'

1 3 4 7 10

2 5 8 10

Count the fingers

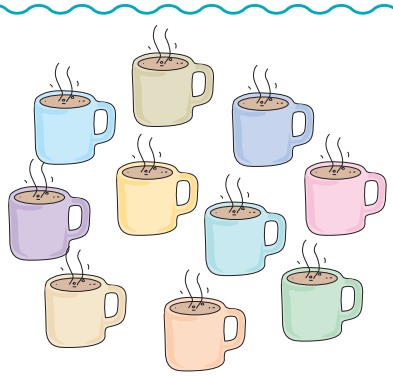


1	5	10	9
8	7	4	10
0	10	3	2
10	8	6	7

Circle the number 10

and

equals



Nine
9

One
1

Ten
10

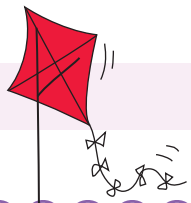
Write.

10 10 10 10 10

APC BOOKS

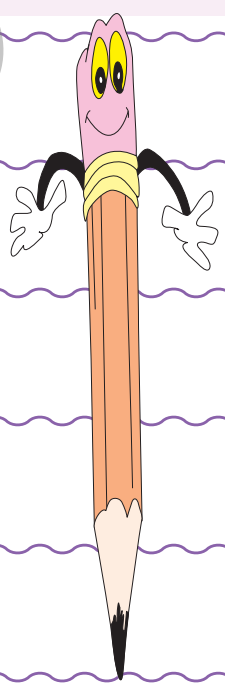
Number and Number Name (1–10)

Write the numbers for:



One	1	Three	
Five		Two	
Four		Nine	
Eight		Seven	
Six		Ten	

Write the number names of:



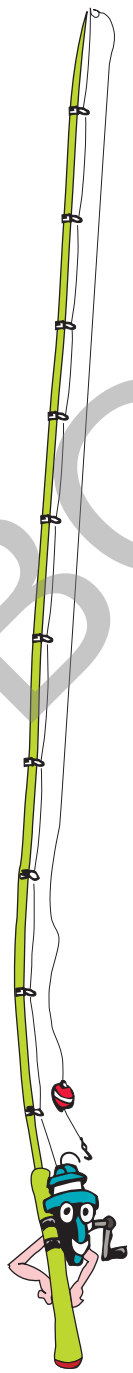
5	Five	2	
1		8	
7		6	
4		9	
3		10	

ABC BOOKS

After – Before

Fill in the placeholders.

3	is after	2	5	is before	6
	is after	7		is before	2
	is after	5		is before	5
	is after	4		is before	7
	is after	9		is before	4
	is after	6		is before	9
4	is after		2	is before	
2	is after		8	is before	
9	is after		3	is before	
7	is after		4	is before	



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Between

Fill in the placeholders.

3 is between 2 and 4

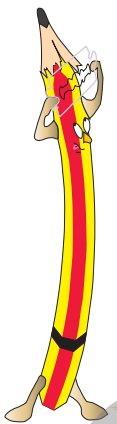
is between 5 and 7

is between 7 and 9

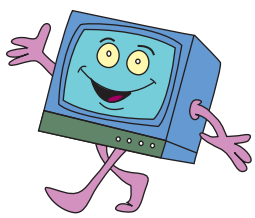
is between 4 and 6

is between 6 and 8

is between 3 and 5



is between 1 and 3



3 is between and 4

5 is between 4 and

7 is between 6 and

6 is between and 7

4 is between and 5

8 is between and

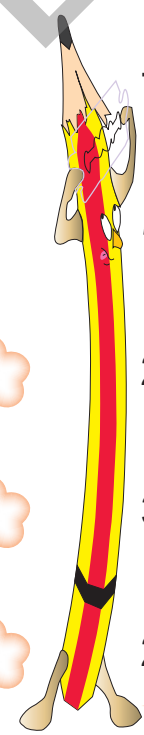
2 is between and

5 is between and

3 is between and

7 is between and

2 is between 1 and



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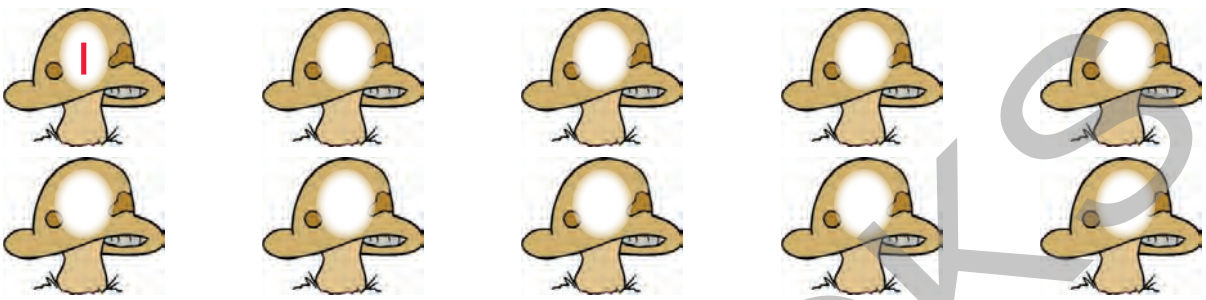
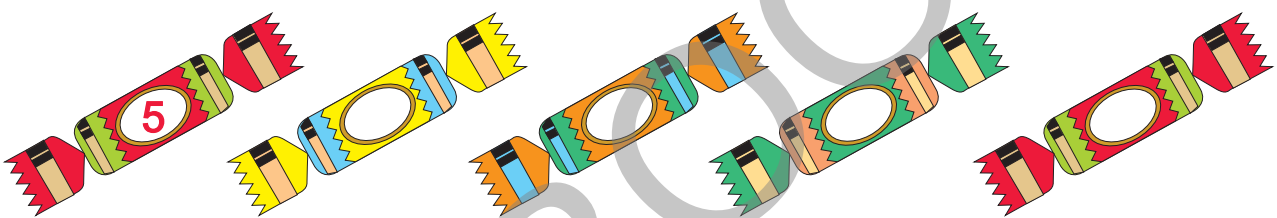
Writing Numbers in Order

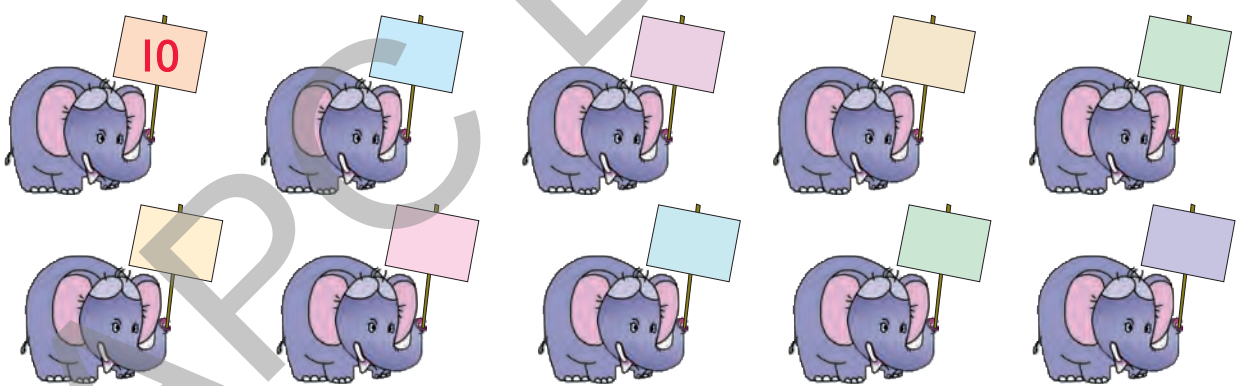
Number the mushrooms in order from 1 to 10.



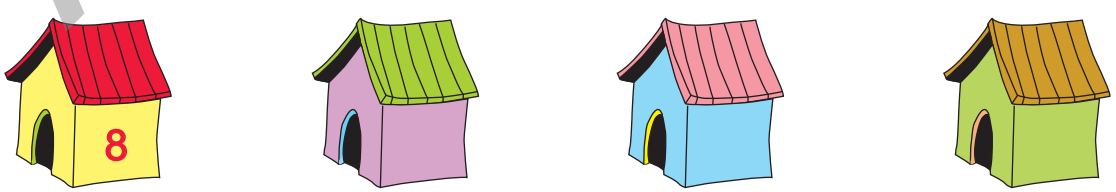
Number the toffees in order from 5 to 9.



Number the elephants in order from 10 to 1.



Number the huts in order from 8 to 5.



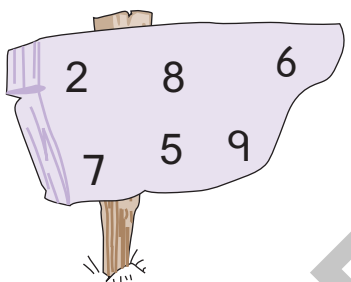
To the teacher: This will help to understand the concept of ascending (increasing) or descending (decreasing) order.

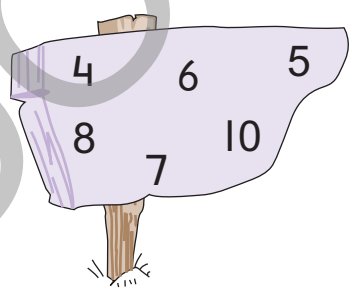
ABC BOOKS

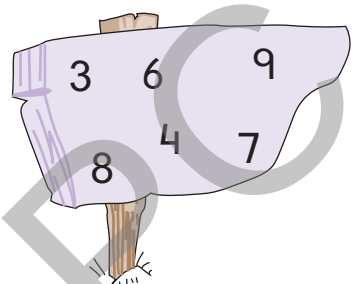
Writing Numbers (1–10) in Ascending (Increasing) Order

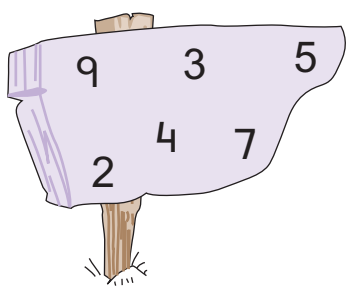
1 3 4 6 7 9

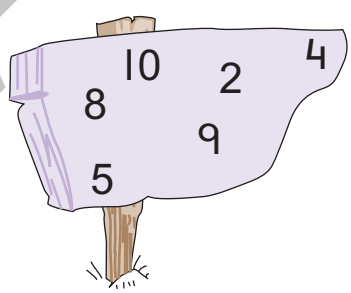
Arrange the numbers from the board in ascending order.

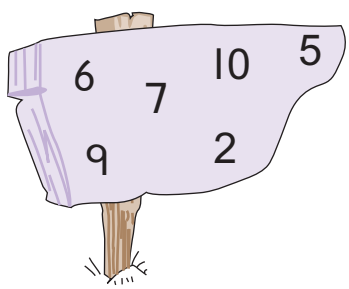










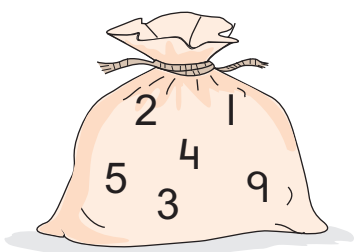


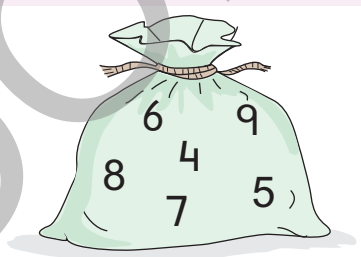
ABC BOOKS

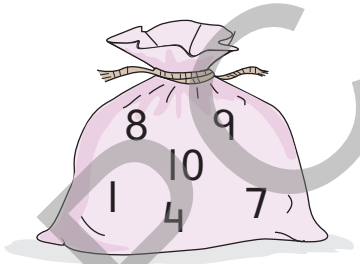
Writing Numbers (1–10) in Descending (Decreasing) Order

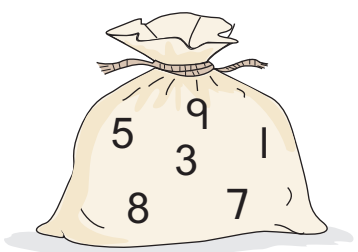
10 7 6 4 2 1

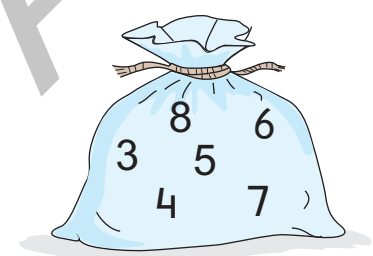
Numbers are placed in bags. Arrange them in descending order.

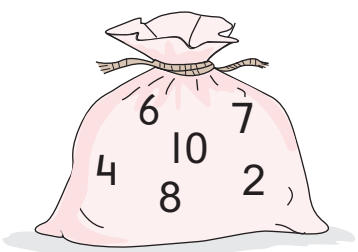










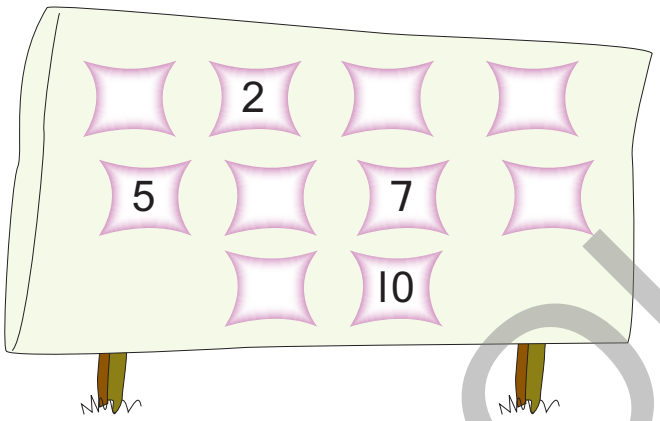


ABC BOOKS

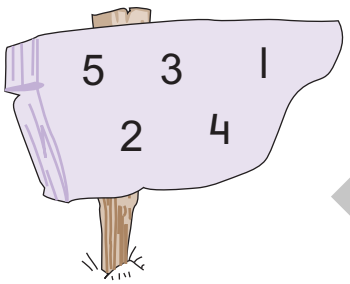


Activity Worksheet 3
(Ordering of Numbers)

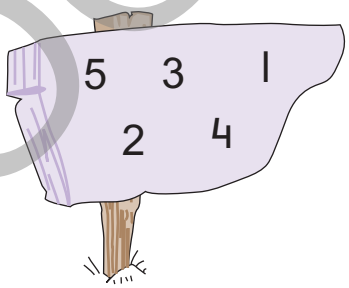
1. Write the missing numbers in each box.



2.



Circle all numbers which come before 4.



Circle all numbers which come after 2.

3. Write the number name.

(a) 9 _____ (b) 8 _____

(c) 6 _____ (d) 10 _____

4. Write 6, 2, 3, 8, 1 in increasing order.

_____ _____ _____ _____ _____

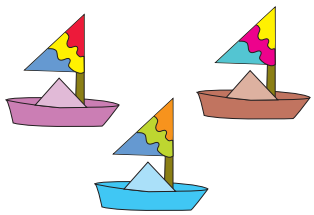
5. Write 4, 7, 9, 2, 8, 1 in decreasing order.

_____ _____ _____ _____ _____ _____

APC BOOKS

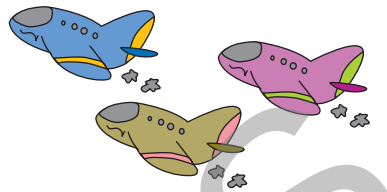
3. Addition (1–10)

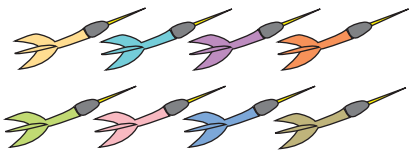
'Equal To' Symbol



3 is equal to 3

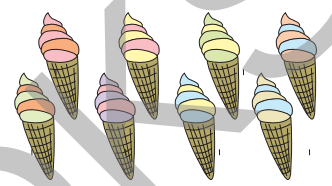
3 = 3



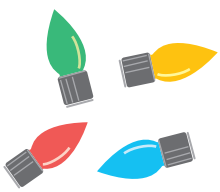


8 is equal to 8

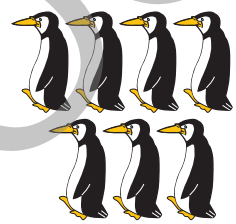
8 = 8

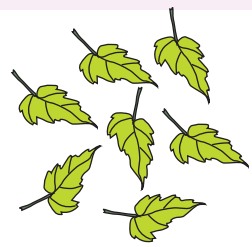


Fill in the placeholders.

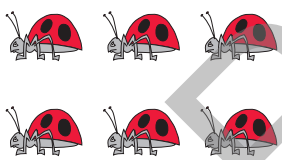


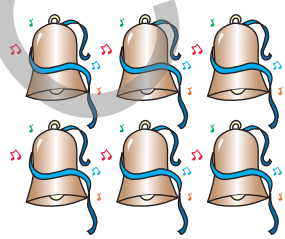
4 = 4





=





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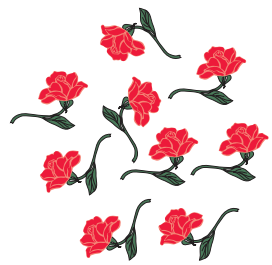
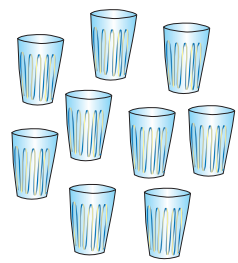




=

Fill in the placeholders.

5 =

3 =

7 7

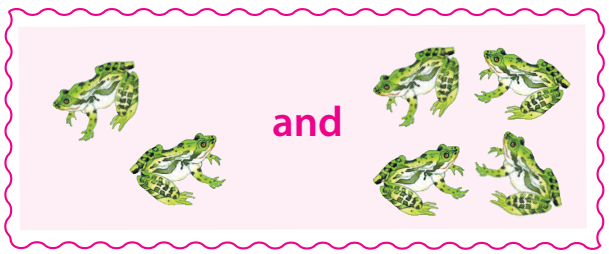
6 6

 = 4

8 =

APC BOOKS

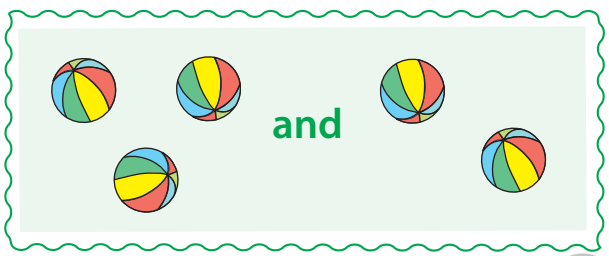
Addition



2 and 4 make 6

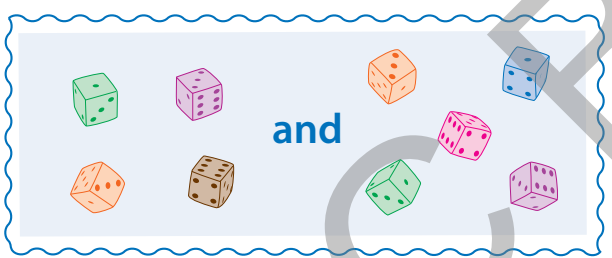
2 + 4 = 6

Add the objects and fill in the space provided.



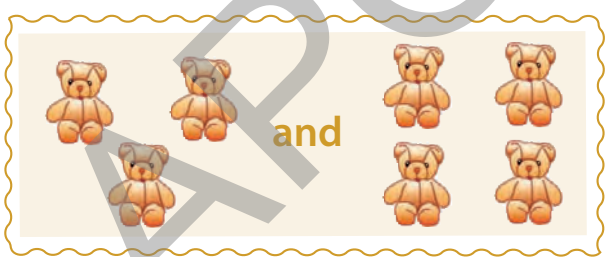
and make

+ =



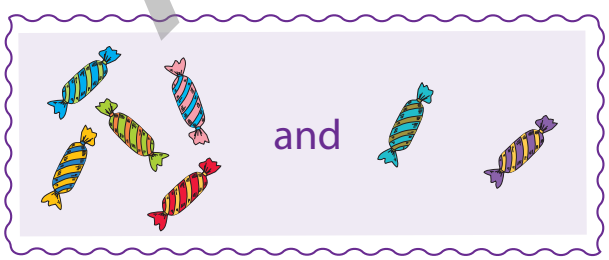
and make

+ =



and make

+ =

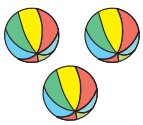
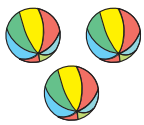


and make

+ =

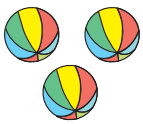
APC BOOKS

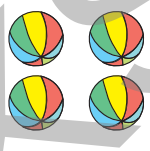
Addition Property of 'Zero' and 'One'

3 + 0 = 3

When we add zero to a number, the number remains the same.





3 + 1 = 4

When we add one to a number, we get the next number.

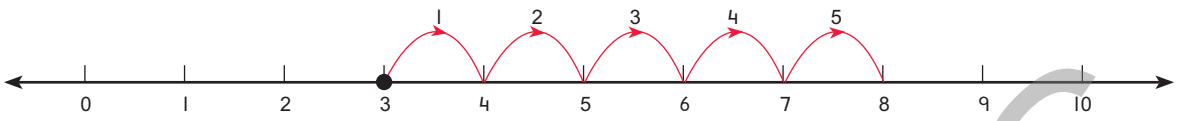
Fill in the placeholders.

0	+	2	=	2	2	+	0	=	2
4	+	0	=		0	+	4	=	
5	+	1	=		1	+	5	=	
0	+	6	=		6	+	0	=	
9	+	1	=		1	+	9	=	
0	+	1	=		1	+	0	=	
3	+	1	=		1	+	3	=	

APC BOOKS

Addition on Number Line (Forward counting)

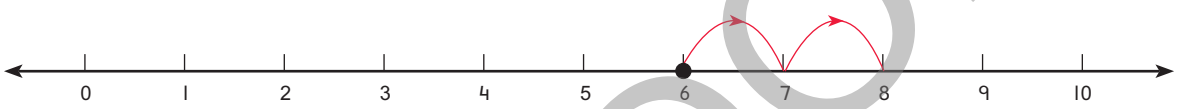
3 + 5



We start from 3 and count 5 ahead. We reach at 8.

So 3 + 5 = 8.

6 + 2

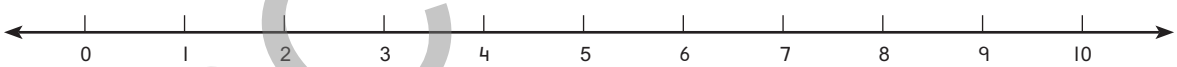


We start from 6 and count 2 ahead.

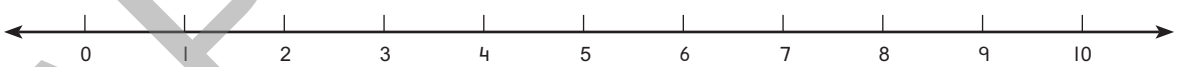
Hence 6 + 2 = 8.

Add.

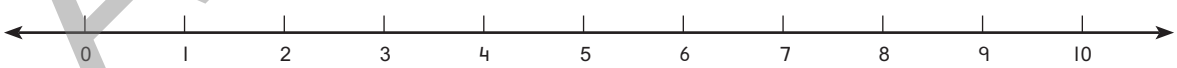
4 + 5 =



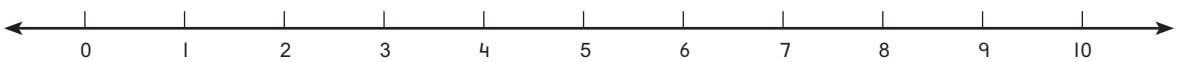
3 + 2 =



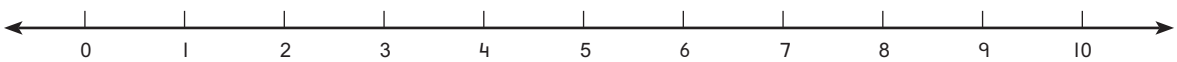
1 + 5 =



8 + 2 =



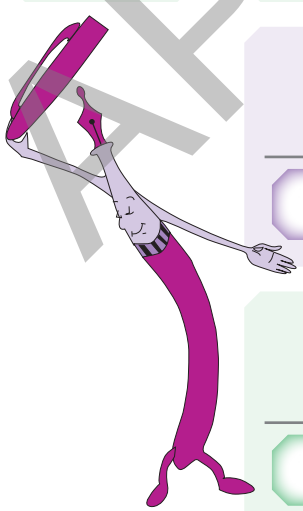
2 + 7 =



APC BOOKS

Vertical Addition

Fill in the boxes.

4 + 2 =	4 + 3 =	5 + 2 =	6 + 3 =	8 + 1 =
		1 + 7 =	4 + 4 =	1 + 4 =
3 + 3 =	2 + 4 =	2 + 7 =	2 + 5 =	
3 + 4 =	3 + 6 =	6 + 1 =	2 + 2 =	1 + 1 =
	4 + 1 =	1 + 6 =	3 + 1 =	1 + 2 =
	4 + 5 =	5 + 3 =	3 + 5 =	1 + 5 =

APC BOOKS

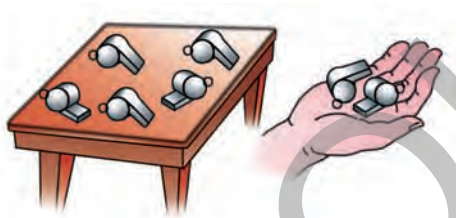
Addition Stories

3 marbles in one hand.
5 marbles in the other hand.

8 marbles in all

$$\begin{array}{r} 3 \\ +\ 5 \\ \hline 8 \end{array}$$

5 whistles on the table.
2 whistles in the hand.



..... whistles in all

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

Diya has 1 doll.
Riya has 4 dolls.

How many dolls do they have?

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

There are 3 birds in one cage.
6 birds in the other cage.

Find the total number of birds in the cages.

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

Anjali spins 6 balls on Monday.
She spins 2 balls on Tuesday.

How many balls does she spin in all?

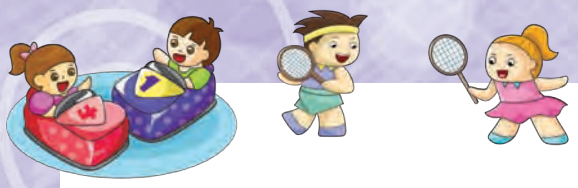
$$\begin{array}{r} \\ + \\ \hline \\ \hline \end{array}$$

Harsh brings 2 apples.
Neha brings 4 apples.

How many apples altogether do they bring?

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

ABC BOOKS



Activity Worksheet 4

(Addition–Sum up to 9)

Add in your mind and then colour the Helicopter.

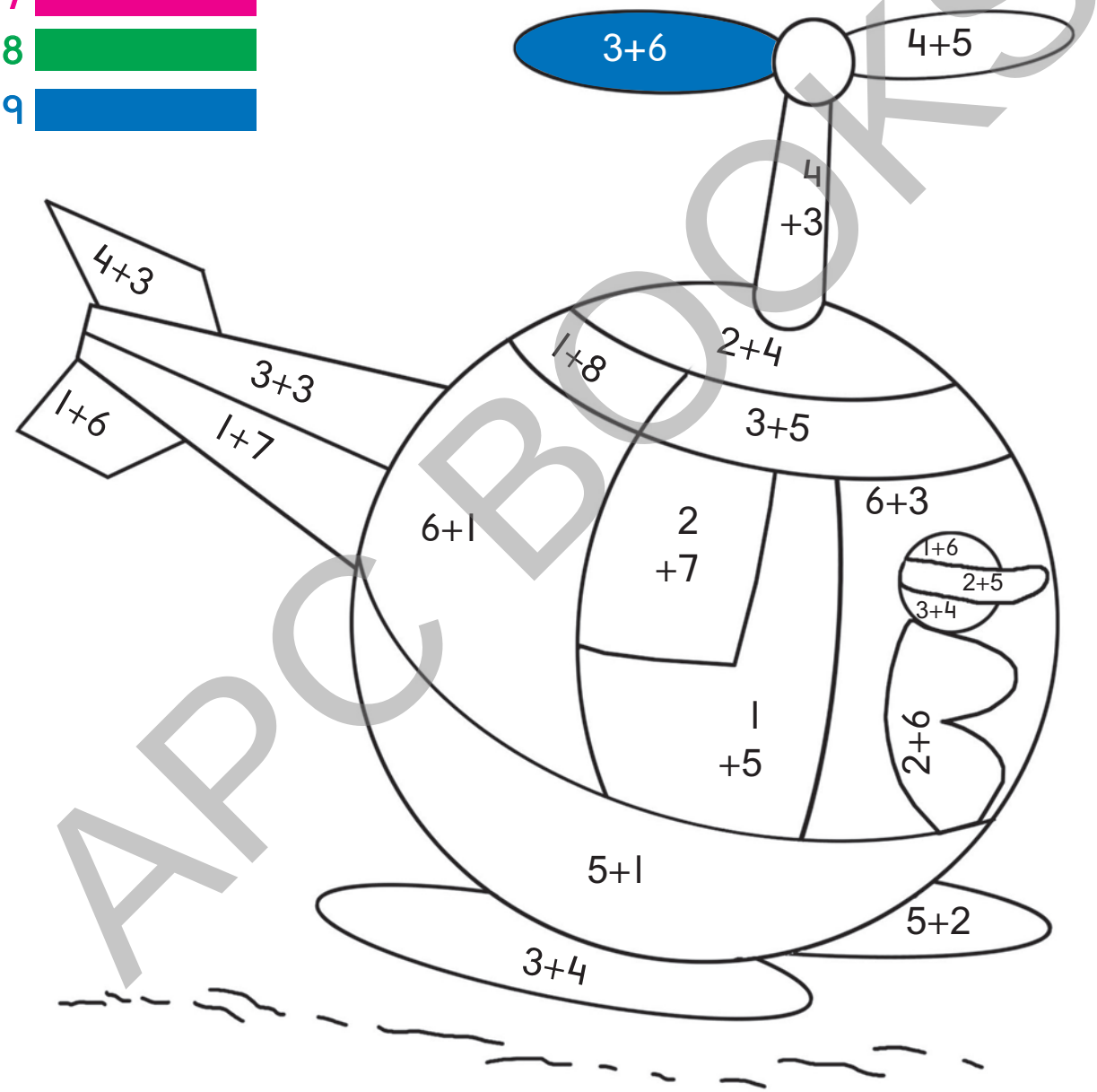
Use the key to colour:

6

7

8

9



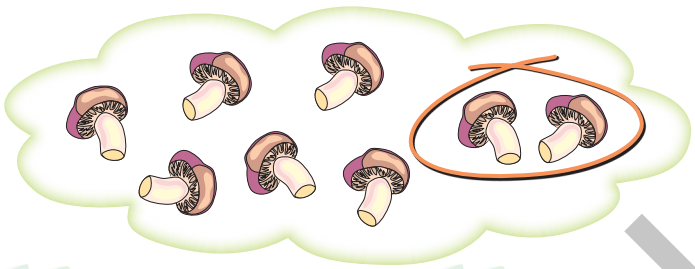
APC BOOKS

To the teacher: Here the objective is to add mentally and then match the answer before colouring. No need to write the sum.

4. Subtraction (1–10)

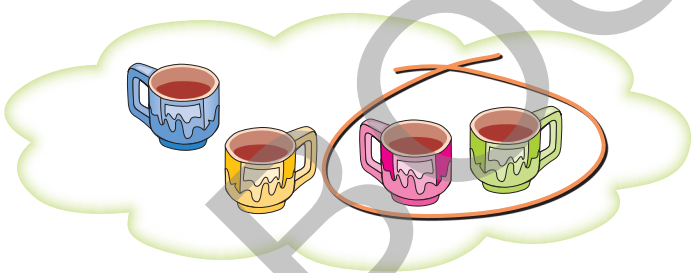
Partitioning of a Collection

Fill in the placeholders.



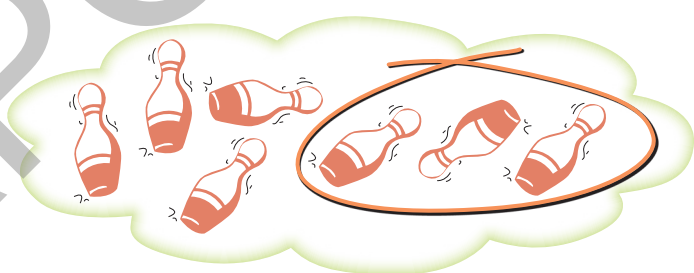
From 8 take away 2 leaves 6

8 – 2 = 6



From ____ take away ____ leaves ____

____ – ____ = ____



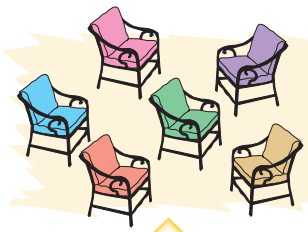
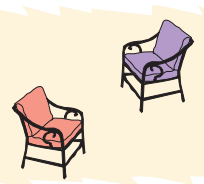
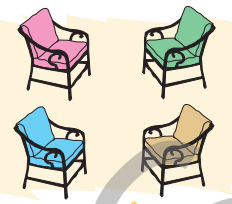
From ____ take away ____ leaves ____

____ – ____ = ____

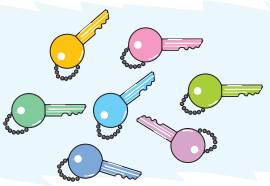
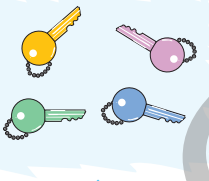
ABC BOOKS

To the teacher: Tell the students that take away is represented by minus (–) in mathematics.

Subtract and fill in the placeholders.


minus

is


6 – 2 = 4


minus

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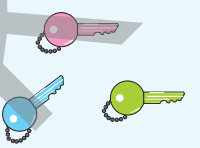
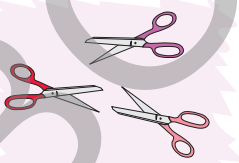
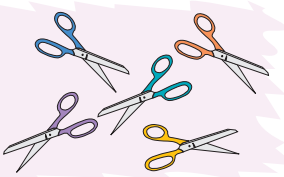
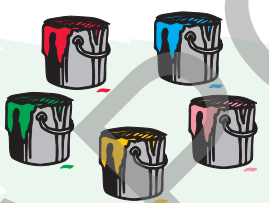


– =


minus

is


– =


minus

is


– =


minus

is


– =

AFC BOOKS

Subtraction Property of 'Zero' and 'One'

There are 3 bananas in a plate.

Mary does not take any banana.

How many bananas are left?

3 – 0 = 3 THREE

When we subtract zero from a number, the number remains the same.

Mary eats one banana. Now two bananas are left.

3 – 1 = 2 TWO

When we subtract one from a number, we get the previous number.

Fill in the placeholders.

3 – 0 =

4 – 0 =

8 – 1 =

7 – 0 =

9 – 1 =

6 – 1 =

1 – 1 =

5 – 0 =

$$\begin{array}{r} 3 \\ -\ 0 \\ \hline \end{array} \qquad \begin{array}{r} 4 \\ -\ 0 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ -\ 0 \\ \hline \end{array} \qquad \begin{array}{r} 7 \\ -\ 0 \\ \hline \end{array}$$

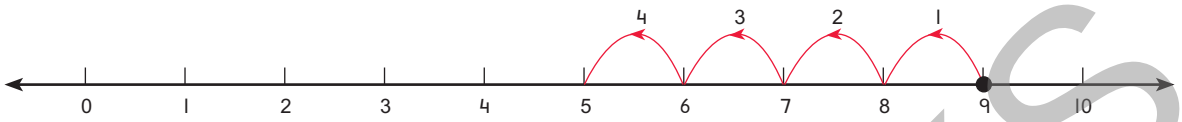
$$\begin{array}{r} 9 \\ -\ 0 \\ \hline \end{array} \qquad \begin{array}{r} 6 \\ -\ 0 \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ -\ 0 \\ \hline \end{array} \qquad \begin{array}{r} 5 \\ -\ 0 \\ \hline \end{array}$$

APC BOOKS

Subtraction on Number Line (Backward counting)

We do backward counting to subtract on number line.
Let us subtract 4 from 9.



Put your finger at 9. Now count 4 moving backwards.

Where did you stop? Yes, at 5.

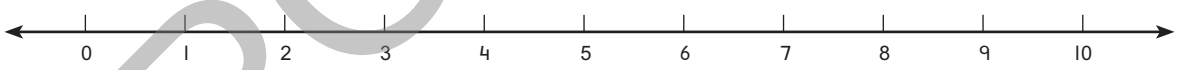
So, 9 – 4 = 5

Subtract by counting backward:

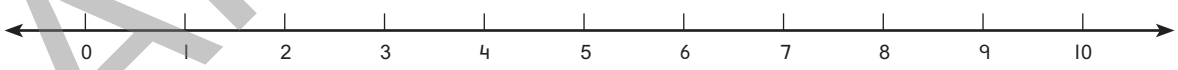
8 – 3 = ☐

6 – 1 = ☐

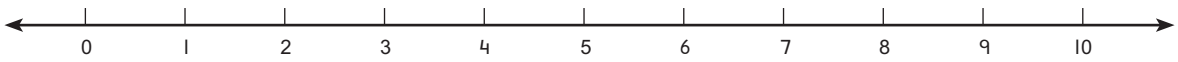
7 – 2 = ☐



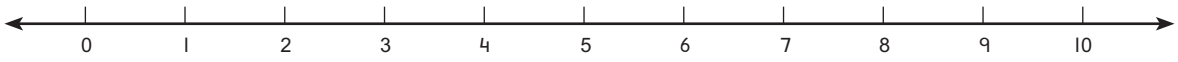
4 – 3 = ☐



10 – 4 = ☐



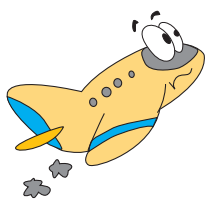
10 – 1 = ☐



APC BOOKS

Vertical Subtraction

Subtract and fill in the boxes.

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

APC BOOKS

Subtraction Stories

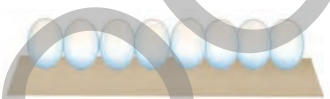
There are 5 birds on a tree.
2 of them fly away.
How many birds are left on the tree?

$$\begin{array}{r} 5 \\ -\ 2 \\ \hline 3 \end{array}$$

Amita buys 7 oranges.
She gives 3 oranges to her brother.
How many oranges has Amita now?

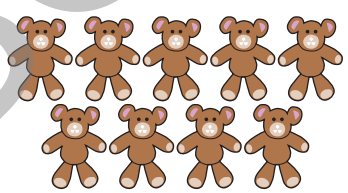
$$\begin{array}{r} \\ - \\ \hline \\ \hline \end{array}$$

Dolly has 8 eggs.
5 of them are broken.
How many eggs are left?



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

Shikha has 9 toys.
She gives 5 toys to her sister.
How many toys has Shikha now?



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

David has 6 chickens.
3 of them die.
How many chickens has he now?

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

Simran needs 8 books.
She has 4 books.
How many books should she buy more?

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

Disha has 5 apples.
She eats 1 apple.
How many apples has she now?

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

APC BOOKS



Activity Worksheet 5

(Subtraction up to 9)

Subtract in the mind and colour the clown cap.

Use the key to colour:

2

3

4

5

8 – 3

7 – 3

8 – 6

6 – 2

7 – 2

6 – 1

9 – 4

8 – 4

5 – 1

6 – 3

8 – 3

4 – 2

3 – 1

5 – 3

APC BOOKS

To the teacher: Here the objective is to subtract mentally and then match the answer before colouring. No need to write the difference.



Worksheet

(Addition and Subtraction)

Fill in the placeholders.

2	+	6	= 8		+		= 7
	+		= 9		+		= 5
	+		= 6		+		= 2
	+		= 4		+		= 3
8	–	3	= 5		–		= 4
	–		= 2		–		= 6
	–		= 7		–		= 9
	–		= 8		–		= 3
	–		= 1		+		= 1

To the teacher: Here a question may have more than one answer. Encourage the students to find all possible answers.

APC BOOKS