GOVERNMENT OF TAMILNADU

எண்ணும் எழுத்தும்

STANDARD : 1, 2 & 3

TEACHER'S HANDBOOK

MATHEMATICS

TERM - II

2025- 2026

Department of School Education

Untouchability is Inhuman and a Crime

Government of Tamil Nadu

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THE CONSTITUTION OF INDIA

PREAMBLE

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a **SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC** and to secure to all its citizens:

JUSTICE, social, economic and political;

LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity;

and to promote among them all

FRATERNITY assuring the diginity of the individual and the unity and integrity of the Nation;

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949, do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

PREFACE

ENNUM EZHUTHUM IS

Child focused
Joyful learning
Simplified teaching and
Lively classroom

The "**Ennum Ezuthum**" Education Plan has been successfully implemented to provide excellent education to future generations. The "Ennum Ezuthum" Education Plan has led the children from darkness to light during the Covid pandemic period. It is marching towards its goal on a victorious path by bridging the learning gap among the children.

Sincere congratulations to everyone who has completed the first term successfully. Your interest and efforts in implementing Ennum Ezuthum are evident through the videos, photographs, and experiences shared in groups.

Introduction

For classes 1 to 3 from the academic year 2022-2023

Objective

To bridge the learning gap caused by Covid-19 pandemic.

Goal

By 2025, all eight-year-olds should be able to read, understand/comprehend and do basic math.

Teaching Learning Material

Teacher's Handbooks for Tamil, English and Mathematics with EVS Integration, Workbooks, EE kit material have been provided. Course corrections have been carried based on feedback from teachers.

Learning Corners

Song corners, story corners, reading corners,creativity corners, puppetry corners, and quiz corners.

Activities

Individual, pair and group activities based on Learning Outcomes.

Technology support

QR codes, Model classes in QR codes, Kalvi TV broadcast and guidance via online groups (WhatsApp, Telegram).

QR codes

Video describing the modules, model classes has been included.

Annexure

Formative assessment (a), Learning Outcomes, Teaching Learning Materials (TLMs)

Project

Simple projects related to day-to-day life situations have been given in Teacher's Handbook.

Lesson Plan

Classroom management will be more effective if the teaching videos for the modules of each week are watched and planned accordingly before writing the lesson plan.

Teacher's Time

The teacher can plan and implement activities according to the classroom environment and the need of the children.

Assessment

Formative assessment (a), Formative assessment (b),
Monthly summative assessment and Term end Summative assessment

Workbook

Workbook activities can be carried out by the students in groups, pairs, or individually. However, students should be encouraged to do the activities in segments like 'I can do' and 'I can do happily' by themselves.

Motivation

Fostering curiosity during the introduction of a concept, with the aim of achieving a desired learning outcome among students, involves utilizing storytelling, discussions, and games as motivational tools.

Concept Formation

Students independently form and grasp concepts through discussions, activities, and games.

Moment of learning

Students confirm their understanding of mathematical concepts by engaging in activities that incorporate motivation and concept formation.

The inclusion of Motivation, Concept Formation, and the Moment of learning in these activities is tailored to the specific requirements. For instance, when dealing with a previously introduced concept, the Moment of learning is presented directly, bypassing the need for additional Motivation and Concept Formation.

Classroom Experience

கணக்கு வகுப்பில் வடிவங்களின் பாடலுக்காகக் குழந்தைகளை சதுரம், செவ்வகம், முக்கோணம் மற்றும் வட்ட வடிவில் தோசை சுட்டு எடுத்துட்டு வாங்க அப்படின்னு சொல்லி இருந்தேன். ஆனால் சில குழந்தைகளின் பெற்றோர்கள் செய்து தரவில்லை. அந்தக் குழந்தைகளின் முகம் மிகவும் வாடி இருந்தது. குழந்தைகளைப் பார்த்த எனக்கு என்ன செய்வது என்று தெரியவில்லை. நான் வீட்டிலிருந்து 7:00 மணிக்கே புறப்படுவதால் செய்து வர முடியவில்லை. 8:15 க்குப் பள்ளி சென்று விடுவதால் குழந்தைகளும் வந்துவிடுவார்கள். கவலையாக இருந்ததைப் பார்த்த சஜிதா சொன்னாங்க, "*மிஸ்!* நீங்க என்ன *டிபன்* எடுத்து வந்து இருக்கீங்க?" "நான் தோசை" என்று சொல்ல, "*மிஸ்!* தோசையைக் *கட்* பண்ணிக்கலாமே! என்று சொன்னாள். நானும் அப்படியே செய்தேன். குழந்தைகள் பாடலை மிக ஆர்வமாக மிக சந்தோஷமாக செய்தனர்.

குழந்தைகள் எனக்குக் கற்றுக் கொடுத்த பாடம் திரு.ராஜேந்திரன் ஐயா அவர்கள் கூறியபடி, ஒவ்வொரு நாளும் ஒவ்வொரு விதமான கற்றலை நாம் குழந்தைகளிடமும் கற்றுக் கொள்கிறோம் என்பதே!

கா.சா.ஷர்மிளா, இ.நி.ஆ
ஊ. ஒ. தொ. பள்ளி, பாளையங்கோட்டை,
ஸ்ரீமுஷ்ணம் ஒன்றியம், கடலூர் மாவட்டம்.

Warm wishes to our dedicated teachers who cultivate an engaging learning atmosphere, encouraging children to actively participate and learn with enthusiasm. They consistently strive to offer opportunities for children to express themselves, uncover hidden talents, and achieve comprehensive learning. Let's soar to new heights by using the experiences from the previous term as stepping stones.

With regards
State Council for educational research and training
Chennai- 6.

CONTENT

AVFO1

E-Book

MRAV5

Evaluation

1 I Know Shapes

S50ID

Learning outcomes

Arumbu

- Identify 2D shapes.
- Know the types of straight lines and apply.

Textbook Pages 1-11

Mottu

- Know the properties of 2D shapes.
- Recall the types of straight lines, curved lines and apply them.

Textbook Pages 1-9

Malar

- Recall the properties of 2D shapes.
- Recall the types of straight lines, curved lines and apply them.

Textbook Pages -

Activity 1

Introduction of 2D shapes

Motivation

Materials required: Sand/ *Kolam* powder, black chart.

The teacher has to first cut a blackchart in the shape of a *dosai* pan. Use *kolam* powder as *dosai* batter. First narrate the story with proper intonation. Mukhil and Selvi were waiting for dinner. Both of them asked their father, "What do we have now to eat?" Father told them "*Dosai*". They happily replied "Oh, *Dosai* and then we need it as we like it." Father immediately said, "I will prepare *dosai* of your choice."

Father prepared *dosai* of many shapes saying Full Moon *Dosai* (Circle), Peanut Candy *Dosai* (Square), Samosa Shaped *Dosai* (triangle), and Cell Phone Shaped *Dosai* (rectangular). Prepare *Dosai* in these shapes while saying each line of the story.

After telling this story, ask the students "Shall we also prepare *dosai* in the same way?" and continue the activity.

Moment of learning

Ask the students to sit in a semi-circle and give some *kolam* powder or sand to each of them.

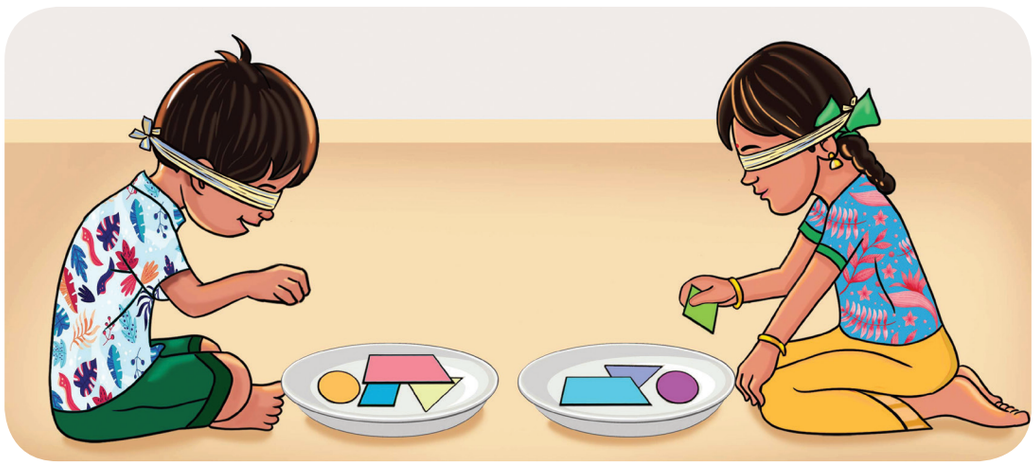
Then ask the students, can you prepare the *dosai* yourself, as in the story? Guide the students prepare *dosai* on the low level blackboard using chalk or on the floor using *kolam* powder in the shape said by the teacher.

Let the students observe the *dosai* and realize that though they are of different sizes they are of the same shape. Ask the students to name the objects in that shape and appreciate the students who had named more number of objects.

Properties of 2D shapes

Materials required: Cut outs of shapes such as square, rectangle, triangle and circle and two plates.

Take equal number of cards in each shape and place them on both the plates. Call two students to come forward. Blindfold both of them and place the plates in front of them.



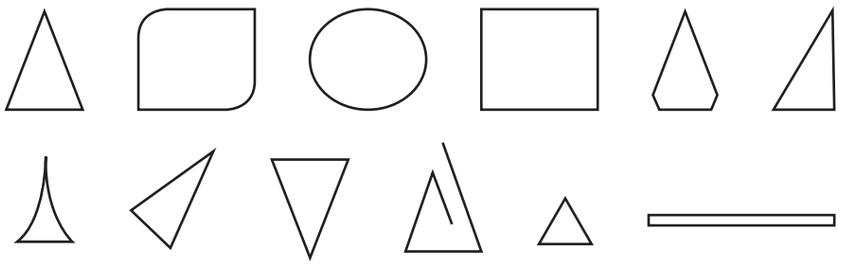
As soon as the teacher says the name of a shape, the students have to pick out that particular shape and keep it separately. The student takes out the most shapes at the end of the specified time is the winner. Continue the activity with other students in the following rounds.

After each round, discuss with the students by asking questions. For example, after the students have taken the square shaped cut outs ask the following questions.

- Are all the shapes taken by them are squares?
- What is the reason to say all these shapes are squares?

Also, Draw each 2D shape in different sizes on the blackboard and ask how many are there in each shape.

For example, draw the following picture on the blackboard and ask "how many triangles are there?" And appreciate the students who have answered correctly.



Learning outcomes

- Identify the 2D shapes.
- Know the properties of 2D shapes.
- Recall the properties of 2D shapes.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	1, 3, 5, 6, 7	3, 4	3, 4	-	-	-
Workbook	1.1	1.1	-	1.1	1.2	1.3

Project: Ask the students to take imprints of 2D shapes using objects at home with natural colours such as beetroot juice or turmeric.

Activity 2

Introduction of straight lines

Motivation

Draw lines of different sizes on the blackboard and ask , “What are these?”Discuss by asking “how does each picture look?”

Concept Formation

Instruct students to draw pictures of their choice using lines. The teacher draws a vertical line and asks the students to colour the vertical lines in their pictures using red colour. Make them count and write the number of vertical lines. Introduce straight lines are called as vertical lines.

Similarly, make them colour slanting lines and horizontal lines by different colours; count and write the numbers and introduce them.

Moment of learning

Instruct as given below and make the students draw in the low level black board.

- Draw a picture using slanting lines only.
- Draw a picture using slanting lines and horizontal lines only.
- Draw a picture using slanting lines and vertical lines only.
- Draw a picture using horizontal lines and vertical lines only.
- Draw a picture using all the three types of lines.

Can you draw pictures without using these three types of lines?

Are there lines in those pictures?

What are the names of those lines?

Learning outcomes

- Know the types of straight lines and apply them.
- Recall the types of straight lines and curved lines and apply them

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	9, 10, 11	5, 6, 7, 8	5, 6, 7, 8	-	-	-
Workbook	1.2	1.2	-	1.4	1.5	1.6

Activity 3

Teacher's time

- Carry out unfinished activities and exercises in this module.
- Check children's textbooks.
- Provide remedial teaching if required.
- Give practice to the children who needs special attention.

Implement any of the above activities as needed or carry out the activities according to the need of your class, children's level and interest.

2 I Know Numbers - I

63DNE

Learning outcomes

Arumbu

- Know numbers from 10 to 20.
- Compare numbers up to 20 and identify big and small number.
- Compare numbers and find before number, after number and number in between.

Textbook Pages 12-26

Mottu

- Know numbers names upto 99.
- Compare numbers up to 99 and identify big and small number.
- Arrange numbers in ascending order and descending order.

Textbook Pages 10-24

Malar

- Know the need for multiplication and use the multiplication symbol.
- Know and apply multiplication tables of 2, 3, 4, 5, 10.

Textbook Pages 1-12

Activity 1

Numbers 1 - 9

Materials required: Things easily available in the environment in the count of 1 to 9.

The teacher has to ensure that there are objects in the classroom suitable for numbers 1 to 9. (For example, 1 table, 2 fans, 3 chairs…) and write the names of those objects in separate paper chits and roll them up.

Divide the students into two groups. Call a student from the first group; Ask her/him to pick a paper chit and the teacher has to read the name of the object on the chit loudly. Both the groups have

to count that object. Give a ★ to the group that finds the number of that object correctly. Ask the groups to write the count on the blackboard. Give one more ★ if the group writes correctly.

● Students have to write the number name. Continue playing like this for a few rounds and announce the group with more ★ as winners and appreciate them.

Introduction of multiplication symbol

Motivation

Materials required: Seeds / stones / beads - 100.

● Divide the students into two groups. Place a heap of seeds/ stones or beads between both the groups. Now the teacher has to say the groups to make small heaps of a particular count. (For example, 6 small heaps with 4 seeds each).

As soon as the teacher says this, both the groups have to make 6 smaller heaps and say the total number of stones. Appreciate the group that says correctly and quickly. Playing a few rounds in the similar manner and discuss by asking the following questions.

- How did you find the answer quickly? Write it on the blackboard.
- Is there any simple way to find the answer other than adding the numbers repeatedly?

Concept formation

Write the repeated addition statements on the blackboard based on the answers given by the students. Discuss about each repeated addition statement as follows and write the multiplication statement on the blackboard.

- How many heaps are there?
- How many seeds are there in each heap?
- How many seeds are there in total?

Number of heaps	×	Number of seeds in each heap	=	Total number of seeds

After writing each multiplication fact in this manner, discuss by asking the following questions and introduce multiplication symbol, multiplier, multiplicand and product.

- What are the similarities and differences between repeated addition fact and multiplication fact?
- What are the similarities in multiplication facts?
- How many symbols are there in each multiplication fact? What are their names?
- How many numbers are there in each multiplication fact?
- What names can be given to each number in a multiplication fact?

Learning outcomes

- Recall the numbers from 1 to 9.
- Recall the number names from 1 to 9.
- Knows the need for multiplication and uses the multiplication symbol.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	12	20	20	-	-	2,3
Workbook	2.1	-	2.1	2.1	2.2	-

Activity 2

- Recall the previous day's activities and make the students do the textbook/workbook exercises.

Introduction of 10

Materials Required: Number card - 10, Picture cards given in the annexure.

The teacher has to narrate the following story to the students using picture cards with appropriate intonation. Meena fostered a hen with great affection in her house. It laid some eggs and started incubation. After a few days, the chicks started to come out of the eggs. Meena liked those chicks very much.

As the chicks started coming out, Meena started to count them as 1, 2, 3… till 9 but after that she did not know how to continue counting the next chick. Shall we help Meena? The teacher has to call the students and give the picture to count and find. Appreciate the students who have found the count correctly with a ★.

After the student's answer, the teacher introduces that the next number after 9 is 10, and also show the number card "10"

Note: The above story can also be performed as a puppet show in the classroom.

Number names of Tens

Materials required: Number cards (10, 20, …90), Cards with the pictures representing 10,20,...90 on one side and their corresponding number names on the other side.

Divide the students into two groups. Give each group a set of picture cards and number cards. When the teacher says start, the groups have to take the number cards for each picture and arrange them in order. Appreciate the group that finishes first and ask the following questions

- How did you match the picture card and the number card?
- Can a number be represented only as a numeral or a picture?
- Can you write the names of the numbers as you write your name?
- If the students answer Yes then ask them 'how will you write the name for the number 20?'
- Then ask the students to turn the picture cards so that the number name is shown. Make the students observe the number and their number names and introduce the number names like ten, twenty, thirty…ninety.

Learning outcomes

- Know and use the number 10.
- Know the numbers names ten, twenty ,…. up to ninety.
- Know the need for multiplication and use the multiplication symbol.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	14, 15, 16	21	21	-	-	-
Workbook	-	2.2	2.3	2.3	2.4	2.5

Activity 3

Numbers 11 - 20

Materials Required: Fruit shaped charts – 2 sets.

Prepare fruit shaped charts as shown in the picture. Stick 11 to 20 stickers (*pottu*/dots) on the upper portion of the shapes. Write the corresponding number in the lower portion. Then, mix up the portions of the fruit shaped charts.

Divide the students into groups of two and give each group a set of fruit shaped charts. When the teacher says start, the students have to look at the pieces of the fruit-shaped cards and join them

correctly to display the picture. The group that displays the correct picture wins. Then, the teacher has to make the group mark the dots on the fruit cards as groups of tens and introduce counting of numbers and expressing them as numerals. For example, if ten is added to one, the teacher should say it is 11 and introduce the respective numeral. Similarly, the teacher has to introduce the numbers 12 to 20.

Make the students write these numbers on the low-level blackboard.

Number names (21 to 99)

Materials required : Number and number name cards for 21-99.

The teacher has to cut out and use the cards of numbers and number names from 21 - 99 in such a way that they can be matched with one another, as shown in the picture.

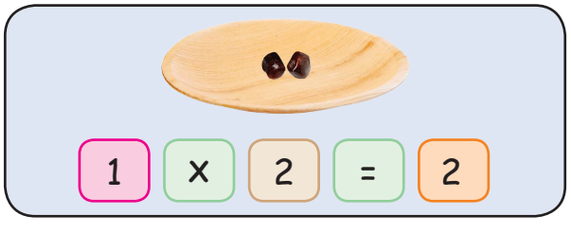
Divide the students into two groups and mix up and place the numbers from 21 to 30 in front of the first group and 31 to 40 in front of the second group. Put the appropriate number names in two boxes and give them to the groups.

When the teacher says, **start**, each group has to place the numbers in correct order and match them with their number names correctly. Once both the groups complete the activity, the teacher has to reinforce once again by saying the number names. Similarly, introduce number names for numbers upto 99

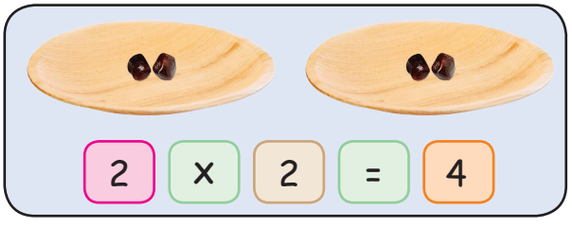
Multiplication table of 2

Materials Required: Small paper plates 10, seeds/beads/stones – 30, number cards from 1 to 20 - 2 sets, number card 2 - 2, multiplication symbol -1, equal symbol -1.

- Ask the students to sit in semicircle shape and place the plates and seeds so that all of them can see them. The teacher has to explain to the students clearly that they have to take one plate at a time.

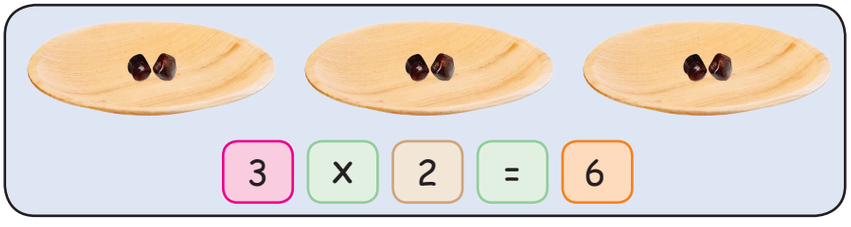


First, the teacher has to introduce the multiplication table of 2. The teacher has to say one time - two seeds and pick a plate, keep it in the front and place two seeds in it. Then, place the number cards below it as shown in the picture and write it on the blackboard.



Next, the teacher has to say two times - two seeds, keep two plates in the front, place the seeds and cards as shown in the picture and write it on the blackboard.

Next, call a student and say three times - two seeds. The student has to keep three plates in the front, place two seeds in each of them, put the cards and write it on the blackboard.



Similarly ask students to place the seeds and number cards, continue to introduce successive repeated multiplication statements up to 10 × 2 = 20.

Help students understand writing a multiplication statement is an alternate form of repeated addition. That is, in 2+2+2 there are three times two seeds. So, make them know that $3 \times 2 = 6$.

Divide the students into groups of five and ask them to sit in a circle as if playing a game January, February. The teacher has to say any two multiplication products from the table. Now, the first student has to say the first line of the multiplication table and tap the second students's hand. Likewise, each student has to say a line and tap the hand of the next student. When the students who say products said by the teacher earlier tries to tap the hand of next student, she/he has to take the hands off. If the student taps, the other student who allows to tap her/his hand then that student must leave the game. If the student who said the line of the multiplication table could not tap the hand of the next student, she/he must leave the game. Likewise, the game has to be continued.

In the end, every student has to write the multiplication table on the low-level blackboard.

Note: Similarly, Continue this activity for all the other multiplication tables. Also, while teaching the multiplication tables every day, encourage the students to sing the table learnt in the previous day in their favourite tune.

Learning outcomes

- Know and use numbers from 11-20.
- Know and use number names from 21-99.
- Know and apply the multiplication table of 2.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	21, 22	-	22, 23, 24	-	-	5
Workbook	-	2.4	-	2.6	2.7	-

Activity 4

Big number and small number

Materials Required : Bottle caps of two different colours 18.

Draw two circles and write tens and ones below it, as shown in the picture.

Call two students and make them stand apart at a specific distance. Give the first student 18 caps of one colour and the second student 18 caps of the other colour. The students have to throw the caps into both the circles, alternately. Then, they have to count and write the numbers on the floor.

Then, the teacher has to introduce students how to compare the two numbers within the circle and find out the **big number** and **small number**. First, compare the colour caps in the tens circle and find out the **big** and **small** numbers. If the number of colour caps in the tens circle are equal, then compare the colour caps in the ones circle. Make the students compare the **big number** and **small number**. Continue the activity in the same manner by involving the other students.

Note: For Arumbu level students , conduct this activity by drawing one circle and using 20 caps.

Multiplication table of 3

Materials Required : Paper balls - 30.

First, the students have to sing the multiplication table of two together in their favourite tune.

Ask the students to make as many paper balls as they wish. Place the balls in a box and keep it in the classroom. Draw 10 circles at a little distance away from the box.

The teacher has to call a student and say two times – 3 balls and the student has to pick the balls in threes for two times and place them in the respective circles. That is, the student has to place three balls each in two circles. Then, the student has to write the multiplication statement as $2 \times 3 =$ on the blackboard. Then, the student has to count the balls in the circles and write the product of the multiplication statement as $2 \times 3 = 6$. The teacher has to verify the answer and appreciate the student by giving a ★. Then, the student has to take the balls from the circles, place them in the box as before and return to her/his place.

Play the game with different students in the successive rounds and continue till the students get sufficient practice in the multiplication table of 3.

Learning outcomes

- Compare numbers up to 20 and identify big and small number.
- Compare numbers up to 90 and identify big and small number.
- Know and apply the multiplication table of 3.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	24, 25	-	10, 11	-	-	7
Workbook	-	2.5	-	2.8	2.9	-

Activity 4

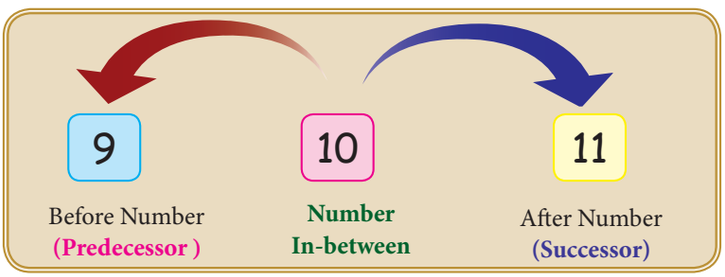
Predecessor, Successor and Number in - between

Materials Required : Medal number cards.

- Prepare sets of 3 medal cards with numbers written on them as shown in the picture and as per requirement. Draw a circle on the floor and place the medals upside down.

Singing the song, *"Chikkubukku train, Chikkubukku train… this is before-after train…",* the students have to come around the circle.

When the teacher signals, the students have to run, pick up and wear any one medal garland. Now, each student has to join with the students associated with her/his number and stand in an arrangement row of three like a train, as per the number sequence. Now, introduce the concept of the before number (predecessor), after number (successor) number in-between with the numbers in the medal garlands worn by the students in sequence.



For example, if the medals 9, 10 and 11 are worn, introduce that the before number (predecessor) of 10, that is, the number before 10 is "9" and the after number (successor) of 10, that is, the number after 10 is "11" and the number in-between 9 and 11 is 10.

Ascending order and Descending order

Materials Required : Stick bundles, sufficient number of sticks and number cards (1-99).

Divide the students into three groups. Give each group 9 stick bundles and sticks. Ask one student from each group to pick a number card. Make them take and keep the respective count of stick bundles and sticks.

First, compare the stick bundles (**tens**) with each of them. Sequence them from the smallest to the biggest in ascending according to the number of stick bundles. If the stick bundles are equal, then compare the sticks and arrange them from small to big in ascending order.

For example, if the number cards 45, 37, 57 are chosen, then arrange them and show as follows.

33 < 45 < 57

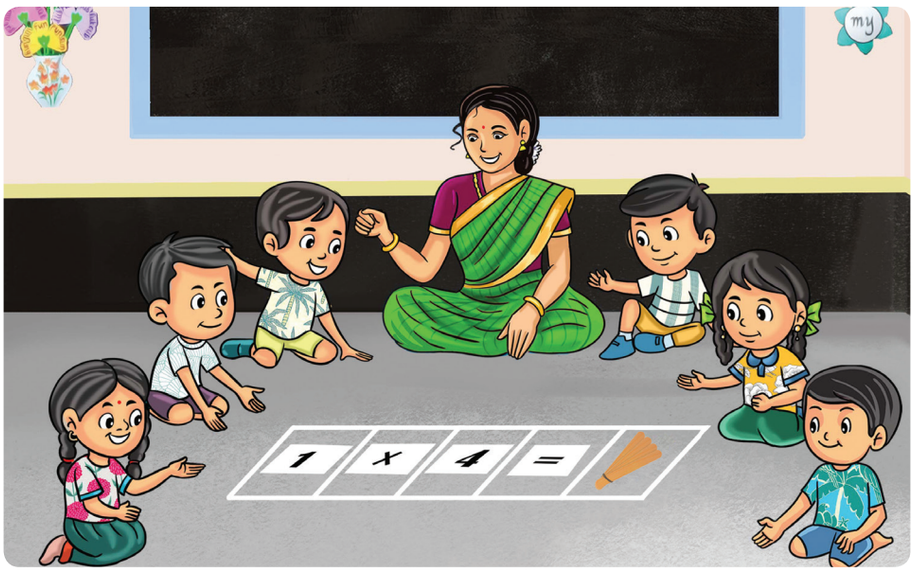
Similarly, compare and arrange in descending order from the biggest to smallest.

Multiplication table of 4

Materials Required : Number cards (1-10), ice cream sticks/sticks/straws in sufficient number, card with multiplication symbol - 1, card with equal symbol - 1.

First, the students have to sing the multiplication table of three together in their favourite tune.

Carry out this activity by drawing boxes on the floor as shown in the picture below. Prepare ten ice cream stick bundles with four ice cream sticks in each bundle. Say one time 4 and place the number cards 1 and 4 in the place for multiplication statement. Then, say one time and place one bundle of ice cream sticks in the appropriate box as shown. Ask the students to write the multiplication statement $1 \times 4 = 4$ in their notebooks.



Then, call a student and say two times 4. The student has to place the number cards as shown before, say two times and place 2 bundles of ice cream sticks in the appropriate boxes and write $2 \times 4 = 8$. Like this, go on finding answers up to $10 \times 4 = 40$ and make the students write it down in their notebooks. In the end, they have to write the multiplication table of 4 on the low-level blackboard.

Learning outcomes

- Compare numbers and find before number, after number and number in between.
- Compare numbers upto 99 and arrange numbers in ascending order and descending order.
- Know and apply the multiplication table of 4.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	23	-	17, 18,19	-	-	9
Workbook	-	2.6, 2.7	-	2.10	2.11	-

Activity 6

- Recall the previous day's activities and make the students do the textbook/workbook exercises.

Create 2-digit numbers

Materials Required : Number cards (0 to 9) - 2 sets.

Concept Formation

Ask the students to stand in a circle. Place two sets of numbers 0-9 in the middle of the circle. When the teacher signals students have to start running. When the teacher signals again, she/he has to go in and pick up any number and stand beside a friend of her/his choice. If any student stands alone, the teacher has to accompany her/him.

Now ask the students to tell the numbers formed by each pair of students and write it on the blackboard.

Then ask the students to turn and stand and tell the number now formed by them and write it on the blackboard beside the previous number formed by them.

Ask the students to observe and tell the differences and similarities between the 2-digit numbers formed by them and make them realise that 2-digit numbers are formed using two single digit numbers.

Moment of learning

Ask the students to write two single digit numbers and form 2-digit numbers using those numbers. Ask the following questions to ensure that students understand the concept.

- Can you pick two numbers other than the numbers you have picked and write 2-digit numbers from it?
- Can 2-digit numbers be formed only if the single digit numbers are different?
- Can this be applied if the two single digit numbers are the same?
- How many 2-digit numbers can be formed if one of the digit is zero?
- Can we form all the 2-digit numbers upto 99 using numbers 0-9?

Note: By using the numbers 4 and 7 only once, without repetition we can create only two numbers 47 and 74. However, by using the numbers with repetition, we can create more than 2, two-digit numbers. For example, by repeatedly using the numbers 4 and 7, we can create 4 two-digit numbers 44, 47, 74, and 77.

Multiplication table of 5

● First, the students have to sing the multiplication table of four together in their favourite tune.

In module 2 activity 5, teach the students multiplication table of 5 using bundles of 5 sticks. Give them practice to write it in their notebooks and on the low-level blackboard.

Multiplication table of 10

Materials Required : 10, 20,... 100 Number cards.

One ten is ten

Two tens are twenty

Three tens are thirty

Four tens are forty

Five tens are fifty

Six tens are sixty

Seven tens are seventy

Eight tens are eighty

Nine tens are ninety

Ten tens are hundred

Ask ten students first and give each student a number card. The students have to stand in ascending order according to the number in the number card. Now, the students have to come forward one by one with the number card singing the above song each a line in order, and show ten-bead strings corresponding to the answer.

As each student comes forward, the teacher has to write the corresponding multiplication statement on the blackboard. Then, instruct the students sing the song together and reinforce the multiplication table.

Learning outcomes

- Compare numbers and find before, after and numbers in-between.
- Form 2-digit numbers using single digit numbers.
- Know and use the multiplication table of 5 and 10.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	26	-	12, 13	-	-	11, 13
Workbook	2.2, 2.3	2.8	-	2.12	2.13	2.14

Activity 7

Teacher's time

- Carry out unfinished activities and exercises in this module.
- Check children's textbooks.
- Provide remedial teaching if required.
- Give practice to the children who needs special attention.

Implement any of the above activities as needed or carry out the activities according to the need of your class, children's level and interest.

3 I Know Numbers - II

TSFGE

Learning outcomes

Arumbu

- Able to add numbers, sum not exceeding 20.

Textbook Pages 27-32

Mottu

- Able to add numbers, with regrouping (sum not exceeding 99).
- Able to subtract numbers up to 99, with regrouping.

Textbook Pages 25-39

Malar

- Know and apply multiplication tables of 6 to 9.
- Solve multiplication problems related to day-to-day life situations.

Textbook Pages 14-18

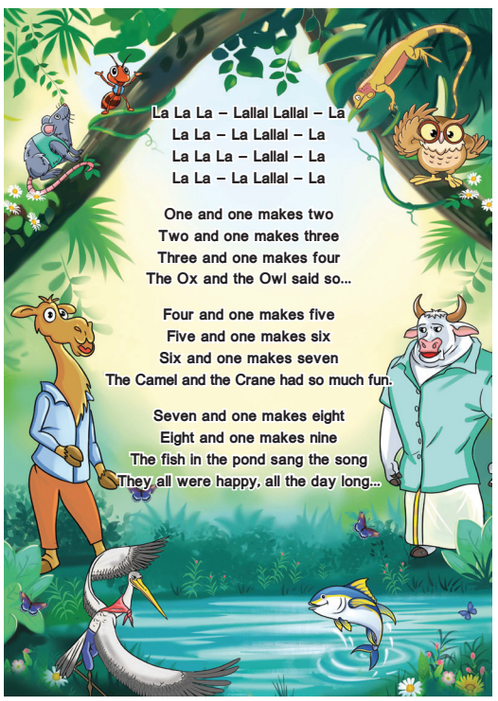
Activity 1

Addition (sum not exceeding 9)

After singing the following song, recall the addition of numbers not exceeding 9 and ask the students to do the text book/ workbook exercises.

Recall the previous day's activities and ask the students to do the textbook/workbook exercises.

CUBTD



Cation! Cation! Multiplication!

Divide the students into two groups. One student from each group has to come forward. Both the students have to stretch their right hand, spread fingers in a number of their choice saying cation... cation... multiplication... say… say... say the answer. Then, they have to find and say the product as per the number of fingers they spread. Give ★ to the student who answers quickly of the two. Likewise, continue the game by calling the next students. In the end, the group that gets more ★ is the winning group.

Learning outcomes

- Able to add numbers, sum not exceeding 9.
- Recall forming 2-digit numbers using single digit numbers.
- Recall the multiplication tables of 2,3,4, 5 and 10.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	27, 28	13, 14	13, 14	-	-	-
Workbook	-	-	-	3.1	3.2	3.3

Activity 2

Addition with regrouping

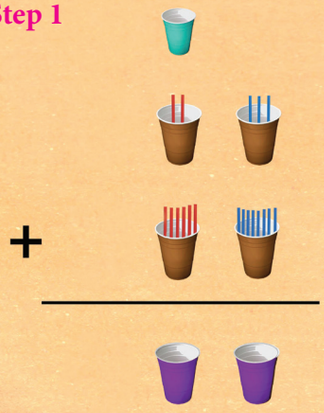
Materials required : Paper cups -14, Addition problem cards (with regrouping) -2, blue and red colour sticks (as required).

- Carry out the activity given below for sum up to 20.

Divide the students into two groups. Give each group 7 paper cups, one addition problem card, blue and red colour sticks (as required). When the teacher signals, as per the given example, the students have to do the problem using the paper cups and sticks according to the number in the card. The group that completes quickly and correctly has to be appreciated by giving a ★. The students who solves the problem incorrectly needs to be guided to do it correctly and then appreciated with a ★.

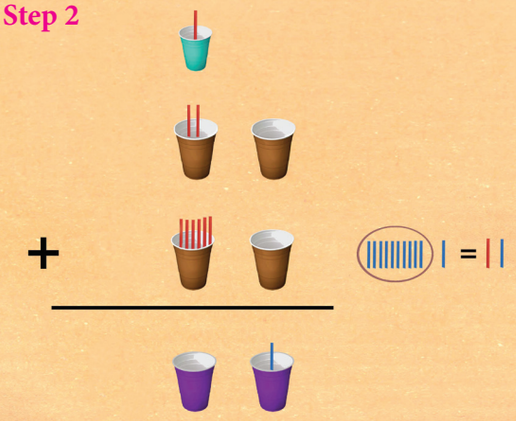
For example, do the addition of two numbers 23 and 68 following the steps given below.

Step 1



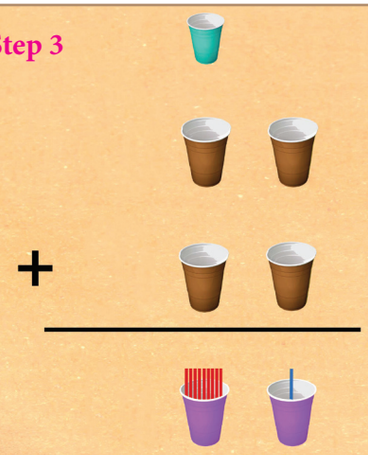
Arrange the paper cups on the floor as shown in the picture. Place the colour sticks according to the place values for the numbers 23 and 68.

Step 2



While adding the numbers in the ones place, we get 3+8=11 ones. Give the 10 blue sticks out of this, get 1 red stick instead of them and place it in the tens place.

Step 3



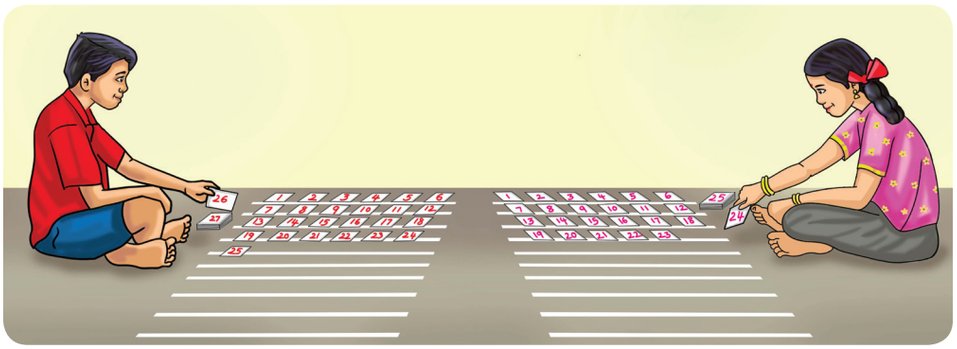
In the tens place we get 2 + 6 + 1 = 9 tens. Place 9 red sticks in the tens place. Hence the sum of 28 and 63 is 91.

Multiplication table of 6 and 7

Materials Required: Small cards with numbers from 1 to 100– 2 sets.

- First, the students have to sing the multiplication table of five together in their favourite tune.

Draw ten lines, one below the other as shown in the picture. Divide the students into two groups. Give each group a set of number cards. In each line, the groups have to place the numbers in order as per the number said by the teacher.



For example, if the teacher says 6, they have to keep placing the cards as below.

1	2	3	4	5	6
7	8	9	10	11	12

After placing numbers in all the ten lines, they have to read the numbers on the right end of each line aloud. The group that finishes this activity first wins.

Then, the teacher has to stand in the first line and say 1 x 6 = 6, the students have to repeat after her/him and write it on the low-level blackboard. Then, the teacher has to stand in the second line and say 2 x 6 = 12, the students have to repeat after her/him and write it on the low-level blackboard. Likewise, the teacher has to introduce up to 10 x 6 = 60. Then, ask the students repeat the multiplication table written by them on the low-level blackboard and reinforce.

Help students understand that the number on the right end in each line is the product to the multiplication statement in the table for the number said by the teacher.

Enable the students learn multiplication table of 7 using the same activity

Learning outcomes

- Able to add numbers, sum not exceeding 20.
- Able to add numbers, sum not exceeding 99 with regrouping.
- Know and use the multiplication tables 6 and 7.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	30	-	25, 29, 30	-	-	-
Workbook	-	3.1	-	3.4	3.5	3.6, 3.7

Activity 3

Ask the students to recall the activities done in the previous day and do the exercises in the workbook.

Learning outcomes

- Able to add numbers, sum not exceeding 20.
- Able to add numbers, sum not exceeding 99 with regrouping.
- Know and use the multiplication tables 6 and 7

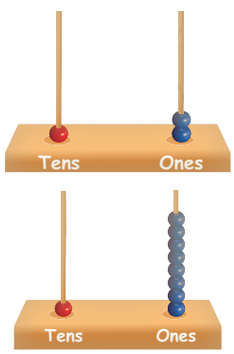
Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	31	-	31, 32	-	-	-
Workbook	-	3.2	-	3.8	3.9	3.10

Activity 4

Recall the previous day's activities and make the students do the textbook/workbook exercises.

Addition (sum not exceeding 20)



Materials Required : Abacus 2, red and blue beads and addition cards (sum not exceeding 20), small card board boxes 2.

Place two abacus and enough number of red and blue beads on the classroom table. Draw two circles in the centre of the classroom and place a small

box in the middle of each circle. Divide the students into two groups and ask them to stand in a line next to the circles.

When the teacher signals, the first student from each group has to come forward, take a card from the box of her/his group and go near the table. She/he has to do the addition using the abacus which is placed on the table and write the answer on the blackboard.

For example, if she/he has a card 12 + 6 =, place 2 blue beads in the **ones** place on the abacus first and then place 1 red bead in the place of **tens**. For second number, she/he has to put 6 blue beads in the **ones** place. Now, she/he has to find the total and write the problem and answer on the blackboard as 12 + 6 = 18.

Then, she/he has to come back and join at the end of their group's line. All the students in the group have to play in the same manner. The group which completes all the sums quickly and correctly wins.

Note: When the blue beads become ten (total number of beads in ones place), they have to be replaced with a red bead and put in the tens place. Remind this to the students when needed.

Multiplication table 8

Materials Required: Papers with numbers written on 10 x 10 grids (in sufficient number), cut out charts.

- First, the students have to sing the multiplication table of seven together in their favourite tune.

Call a student and ask her/him to place a cut out chart vertically on the multiplication table of her/his choice. The teacher has to explain to the students that by placing the second cut out chart horizontally and moving it down line by line from the top, the product to each of the multiplication statement for that particular multiplication table can be found.

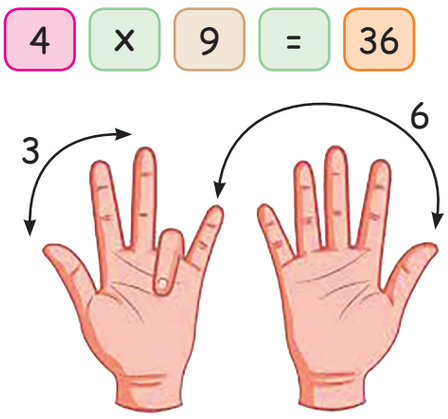
	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	48	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

For example, by placing the first cut out chart vertically on number 8, placing the second cut out chart horizontally and moving it down line by line from the top they can know 1 x 8 = 8, 2 x 8 =16….

Divide the students into two groups, ask them to write the multiplication table of 8 once again on the low-level blackboard. The group which completes this quickly and correctly wins.

Multiplication table 9

Ask all the students to spread and show their ten fingers towards themselves as shown in the picture. When the teacher says 1 × 9 they have to fold the thumb of left hand. Now, there will be 9 fingers on the right side of the folded finger. So, introduce 1 × 9 = 9 by showing the fingers.



After this, when folding the next finger (index finger of left hand) and saying 2 × 9, there will be 1 finger on the left side of the folded finger and 8 fingers on its right side. So, introduce the students that 18 is the answer. The fingers on the left side of the folded finger indicate tens and the fingers on its right side indicate ones.

Likewise, introduce multiplication table of 9 up to 10 × 9 = 90 by folding the consecutive fingers. Then, call the students one by one to the front and make them say the multiplication table of 9. Make them write and practice on the low-level blackboard.

Note: While telling the difference between 1 × 9 = 9 and 10 × 9 = 90, the concept of place value has to be explained. That is, when it is 1 × 9 = 9 we fold the first finger and so, 09 (tens place value is 0 and ones place value is 9) is 9. When it is 10 × 9 = 90 we fold the last finger, that is, 90 (tens place value is 9 and ones place value is 0) is 90.

Learning outcomes

- Able to add numbers, sum not exceeding 20.
- Able to add numbers, sum not exceeding 99 with regrouping.
- Know and use the multiplication tables 8 and 9

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	32	-	-	-	-	-
Workbook	-	3.3	3.4	3.11	3.12	3.13, 3.14

Activity 5

Make the students recall the activities done in the previous day and do the exercises in the workbook.

Learning outcomes

- Able to add numbers, sum not exceeding 20.
- Able to add numbers, sum not exceeding 99 with regrouping.
- Know and use the multiplication tables 8 and 9

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	-	-	-	-	-	-
Workbook	3.1	3.5	3.6	3.15	3.16	3.17

Activity 6

Recall the previous day's activities and make the students do the textbook/workbook exercises.

Subtraction (upto 99)

Materials required : (Single beads -19, bead strings -9) – 2 sets, number cards from 1-99 .

● Divide the students into two groups. Give each group 9 bead strings and 19 single beads. Draw a circle in front of both the groups and the keep the number cards with numbers 1 to 99 written on them.

When the teacher claps, one student from each group has to run and pick a number card each from the circle. The student who had picked the big number card alone has to get that many beads from her/his group.

For example, if the number cards picked by the two students are 63 and 18 respectively, then the student who picked the big number card 63 has to get beads in 6 tens and 3 ones from her/his group. Then the second student who picked the small number card 18 has to ask that many beads from the student who picked the big number card.

First, 8 single beads cannot be given from the 3 single beads. So, one 10-bead string has to be given to her/his group and 10 single beads have to be received. Now, there will be beads in 5 tens and 13 ones with the student who picked the big number card. From these, 1 tens and 8 ones, beads have to be taken and given to the student who picked the small number card. Of the remaining beads, there are 4 tens and 5 ones so, the student has to say 45. The game has to be continued in the same manner until the students are strengthened in subtraction with regrouping.

Note: While subtracting a single-digit number from a two-digit number, write the two-digit number first and write the single-digit number in the ones place, below it. Then, subtract the ones of the second number from the ones of the first number (if subtraction with regrouping is required) and write the answer in the ones place. After that, explain the students that the remaining number in the tens place can be written as it is in the tens place of the answer.

STEP 1

	T	O
	4	5
-		7

STEP 2

	T	O
	3	15
	~~4~~	~~5~~
-		7

STEP 3

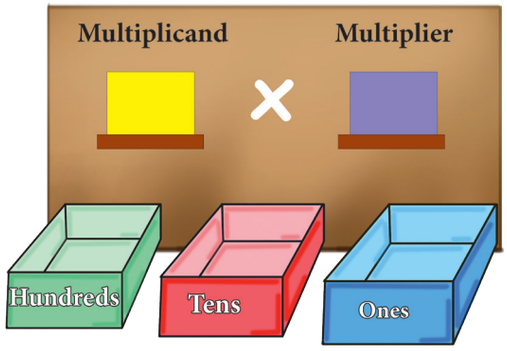
	T	O
	3	15
	~~4~~	~~5~~
-		7
		8

STEP 4

	T	O
	3	15
	~~4~~	~~5~~
-		7
	3	8

Multiplication of two digit number by one digit number

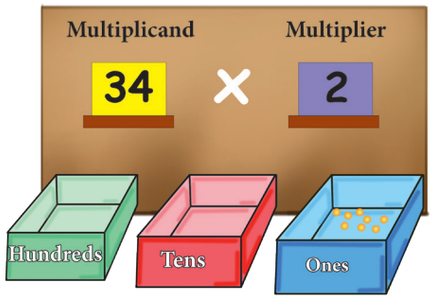
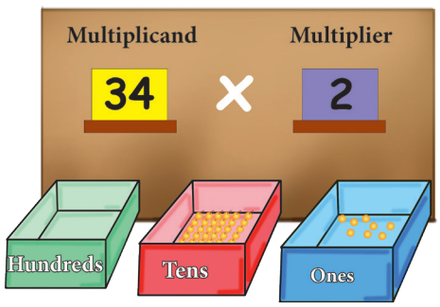
Materials required: Beads (hundreds, tens and ones), paper cups or small cardboard boxes -3, Number cards (0-9) – 3 sets.



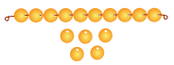
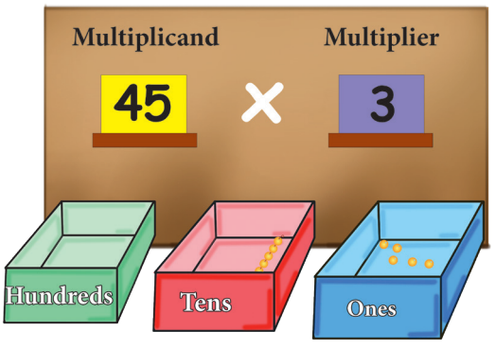
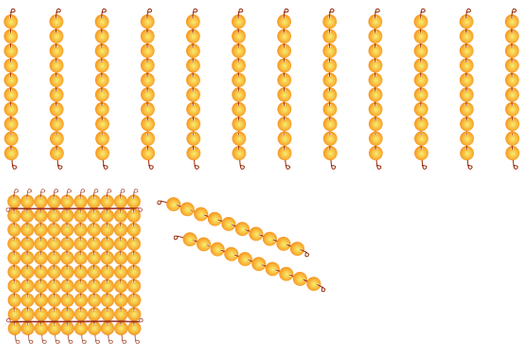
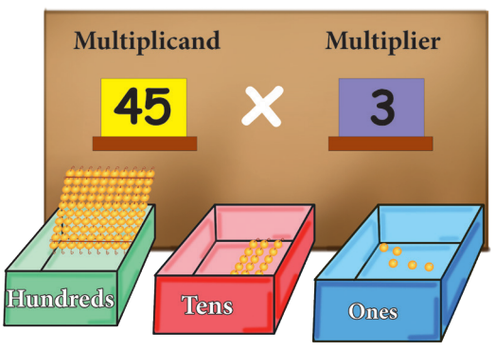
Ask the students to sit in U shape in front of the teacher. Take three boxes, write ones, tens, hundreds on them and keep them ready. Paste them on cardboard as shown in the picture and prepare a multiplication tool.

Ask the students for a two-digit number and a multiplying number of their choice and write them. Then, introduce multiplying of two-digit number with single-digit number as given in the following examples.

Example 1 : 34 x 2 =

Step 1: First, multiply the ones with ones. 4 × 2 = 8, take 8 single beads and keep it in the box labelled for 'ones'.	
Step 2: Multiply the tens with ones. 3 tens × 2 = 6 tens. Take 6 ten-bead strings and keep it in the box labelled for 'tens'.	
Step 3: Write the product.	34 x 2 =68

Example 2 : 45 x 3 =

Step 1: First, multiply the ones with ones. 5 x 3 = 15, Take fifteen single beads, then replace 10 single beads by 1 ten bead string and place 5 single beads.	
Step 2: Place the single beads in the box labelled for 'ones' and the ten-bead string in the box labelled for 'tens'.	
Step 3: Then, multiply tens with ones. 4 tens X 3 = 12 tens. Take 12 ten-bead strings. In these, replace 10 ten-bead strings with a hundred-bead string.	
Step 4: Place two ten-bead strings in the box labelled for 'tens'. Place a hundred-bead string bunch in the box labelled for 'hundreds'.	
Step 5: Write the product.	45 x 3 =135

A multiplication statement is formed in the order of Multiplicand X Multiplier = Product. Make the students understand that, in the multiplication statement 45 x 3 =135, 45 is the multiplicand, 3 is the multiplier and 135 is the product.

Learning outcomes

- Know addition sum not exceeding 20.
- Know subtraction of numbers upto 99.
- Know and apply the multiplication of 2-digit numbers by single digit numbers.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	-	37	33, 37	-	-	14, 16
Workbook	3.2	3.7	-	3.18	3.19	-

Activity 7

Make the students recall the activities done in the previous day and do the exercises in the workbook.

Learning outcomes

- Know addition sum not exceeding 20.
- Know subtraction of numbers upto 99.
- Know and apply the multiplication of 2-digit numbers by single digit numbers.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	-	-	38, 39	-	-	-
Workbook	3.3, 3.4	3.8	-	3.20	3.21	3.22

Activity 8

Recall the previous day's activities and make the students do the textbook/workbook exercises.

Multiplication in day-to-day life situations

Materials required: 1-9 medal cards - 2 sets, card with multiplication symbol, cards with day-to-day multiplication problems written on it, crowns.

Place the cards with multiplication problems and medal cards on the table at the centre of the classroom. Place the card with sign on the classroom wall.

Multiplicand **Multiplier**

Divide the students into two groups. When the teacher says start, two students from the first group and one student from the second group has to come forward. Students from the first group has to take a card with multiplication and read it. For example, Raja bought 3 boxes of apples each containing 25 apples. How many apples did Raja buy? Then the students have to wear the numbers according to the problem. First group has to act as multiplicand whereas second group has to act as multiplier and stand to the left and right sides of the multiplication symbols respectively. The teacher has to write these numbers on the blackboard step by step and conduct activities to improve multiplication skills.

	H	T	O
		2	5
×			3

Step 1:

Multiplying ones with ones.

Now, the student from the second group has to shake hands with the student of the first group who is in the ones place.

Saying that the product of 5 × 3 is 15, she/he has to write only the number 5 in the ones place and write the remaining 1 ten in the tens place.

5 × 3 = 15

	H	T	O
		1	
		2	5
×			3
			5

Step 2:

Multiplying tens with ones.

Now, the student in the tens place has to wear the crown with number 1.Then, the student of the second group has to shake hands with her/him.

She/he has to say the answer as 2 tens × 3 = 6 tens. Before writing the answer she/he has to add the 1 ten and say there are 7 tens in total and write 7 in the tens place.

	H	T	O
		1	
		2	5
×			3
		7	5

Appreciate the student of second group with ★. Likewise, keep changing the groups in the successive rounds, call students in groups of three and give practice until they get clear understanding in multiplying with single-digit number.

Learning outcomes

- Know addition sum not exceeding 20.
- Know and apply subtraction of numbers upto 99.
- Solve the multiplication problems related to daily life situations.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	-	-	-	-	-	16, 18
Workbook	3.5	3.9	3.10	3.23	3.24	-

Activity 9

Ask the students recall the activities done in the previous day and do the exercises in the workbook.

Learning outcomes

- Know addition sum not exceeding 20.
- Know subtraction of numbers upto 99.
- Solve multiplication problems in day-to-day life.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	-	-	-	-	-	-
Workbook	3.6	3.11	3.12	3.25	3.26	3.27

Activity 10

Teacher's time

- Carry out unfinished activities and exercises in this module.
- Check children's textbooks.
- Provide remedial teaching if required.
- Give practice to the children who needs special attention.

Implement any of the above activities as needed or carry out the activities according to the need of your class, children's level and interest.

4 I Know Patterns

Learning outcomes

Arumbu

- Create patterns in body movements and shapes.
- Create pattern in numbers

Textbook Pages 33-38

Mottu

- Recall and create patterns in shapes
- Create patterns using imprints

Textbook Pages 40-45

Malar

- Create patterns while adding and subtracting odd numbers and even numbers.

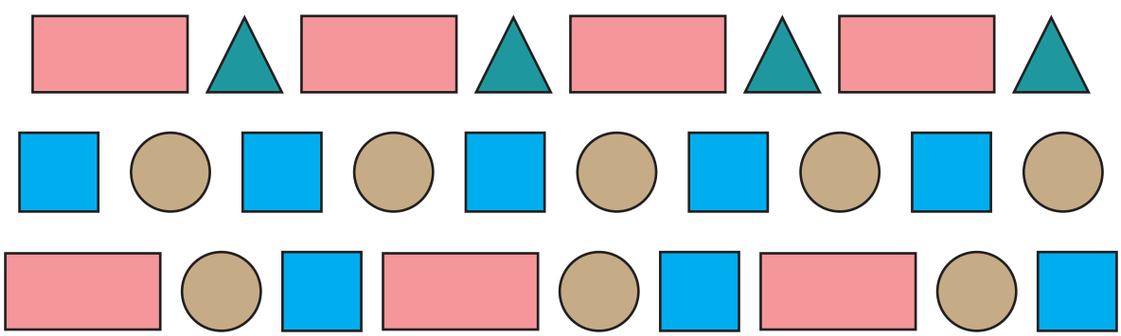
Textbook Pages 19-22

Activity 1

Patterns in shapes

Motivation

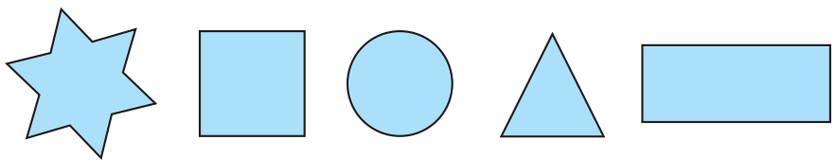
Materials required : shapes like square, triangle, circle, rectangle



Draw patterns of shapes as shown on the blackboard and make the students observe and discuss by asking the following questions

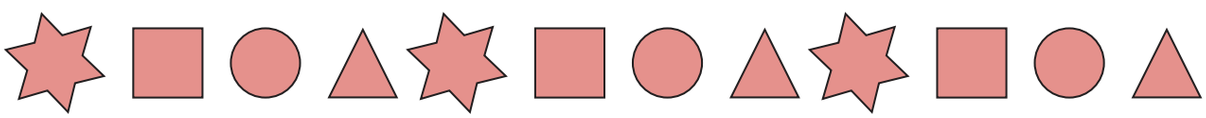
- Name the shapes in the given pattern
- How many shapes are there in the pattern ?
- How many squares are there in the pattern ?
- Which shape comes first ? which shape comes next?
- Can you create similar patterns?

Moment of learning



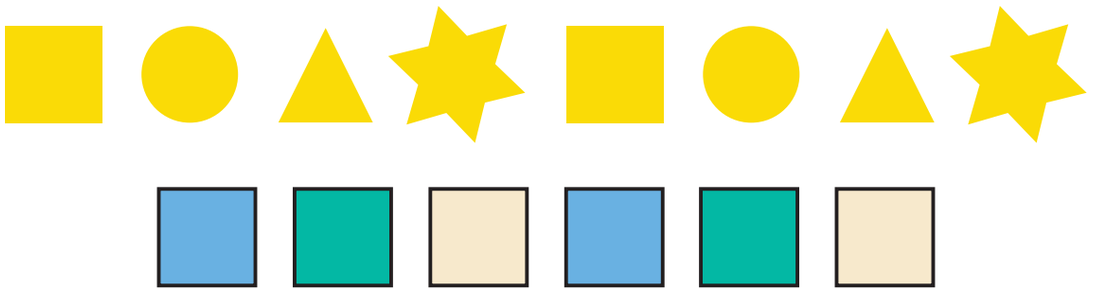
Divide the students into two groups. Cut out the above shapes in sufficient number from a white sheet of paper and place them in a box and give equal number of shapes to both the groups.

When the teacher signals, the group has to take the shapes from their box and keep them in order in any one particular pattern. Then, make them to shade each shape of the pattern arrangement in a colour.



The teacher has to explain the patterns of colours and shapes to the students of both groups. Continue the activity by interchanging the groups.

Enable the students understand that pattern of shapes can be created as follows, also.



Cation! Cation! Multiplication!

Divide the students into two groups. The first group students have to say "cation; cation; multiplication; say; say; say the answer! And say a multiplication fact (Example 4x7)while singing. The second group has to find the answer and tell. If the group answers correctly appreciate by giving a ★. Then interchange the groups and continue the game. Announce the group that gets more number of ★ as the winner.

Learning outcomes

- Create patterns in shapes.
- Recall and create patterns in shapes.
- Recall the multiplication tables 1 to 10

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	33, 34	-	43	-	-	-
Workbook	4.1	4.1	-	4.1	4.2	4.3

Activity 2

- Recall the previous day's activities and carry out the workbook activities.

Pattern in body movements

Ask the students to stand in a circle. When the teacher says coconut. students have to sit. When the teacher says coconut tree., students have to stand.

The teacher has to say the words in different patterns like following and the students have to do accordingly.

Coconut! Coconut tree !
Coconut! Coconut tree !

Coconut! Coconut! Coconut Tree!
Coconut! Coconut! Coconut Tree!

Coconut! Coconut! Coconut tree! Coconut tree!...
Coconut! Coconut! Coconut tree! Coconut tree!...

Coconut tree! Coconut! Coconut tree! Coconut !
Coconut tree! Coconut !Coconut tree! Coconut !

Students who do the actions incorrectly will be out of the game. Those who plays correctly till the end is the winner.

Introduce that repeating same movements is called as pattens in body movements. Ask the students , "Where do we see such similar body movements?" Discuss.

Patterns in odd numbers and even numbers

- Write the following addition problems on the blackboard.

45 + 37 =	23 + 75 =	61 + 19 =	247 + 725 =	109 + 777 =
_____	_____	_____	_____	_____

Ask the students to find the sum, later discuss with the students by asking the following questions.

- What is the digit in the ones place of the first addends in the given problems?
- What is the similarity in the ones place of the given five problems?
- What is the similarity among the second addends of the given problems?
- What is the similarity in the ones place of the sum?

From the answers given by the students, make them understand that when two odd numbers are added we get even number as answer.

Also ask the students, "Whether this statement is true only for the above five problems or is it we true for all the problems". If the students say it is true for all the problems, make them write five more problems of their choice and find the answer for it.

Ask the students, "Does this statement apply only to addition problems? Or does it apply to subtraction problems as well?" And make them write five subtraction problems and find the answer and verify the statement that subtracting an odd number from an odd number gives an even number.

Ask them to write problems for the following statements on the blackboard and verify the same.

- ✓ Adding an even number to an even number gives an even number.
- ✓ Subtracting an even number from an even number gives an even number.
- ✓ Adding an even number to an odd number gives an odd number.
- ✓ Subtracting an odd number from an even number gives an odd number.
- ✓ Adding an odd number to an even number gives an odd number.
- ✓ Subtracting an even number from an odd number gives an odd number.

Learning outcomes

- Create patterns in body movements.
- Recall and create patterns in shapes.
- Identify patterns in numbers by adding and subtracting even numbers and odd numbers.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	36	-	45	-	-	19, 20
Workbook	4.2	4.2	-	4.4, 4.6	4.5, 4.7	-

Activity 3

- Recall previous day activities and carry out workbook exercises.

Patterns in numbers

Materials required : Number cards from 1 to 20, beads.

Draw a line at the centre of the ground. Make 20 students to hold the number cards and stand in a line.

Now, when the teacher says one in the front and one at the back, the first student has to come to the front. The second student has to go back. The third student has to come to the front and the fourth student has to go back. When continuing like this, the students will stand in two lines as shown below.

1, 3,5,7,9,11,13,15,17,19 (**alternate counting pattern**)

2,4,6,8,10,12,14,16,18,20 (**alternate counting pattern**)

Now, introduce the number pattern formed by the students.

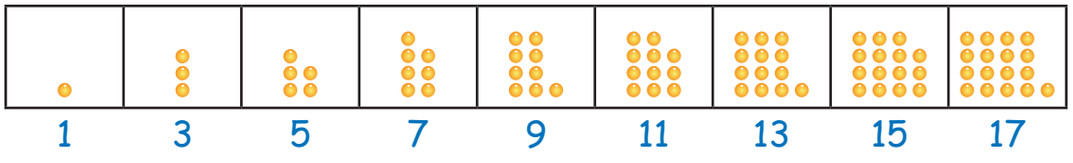
In the next round by saying one in the front and two at the back, introduce the pattern as follows.

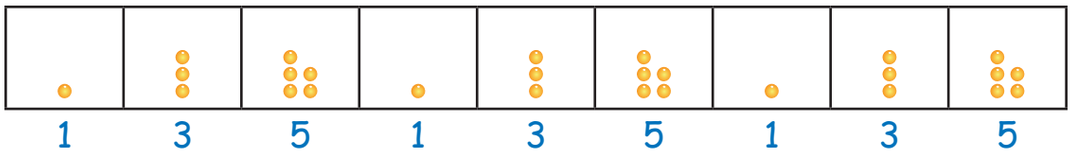
1, 4, 7, 10, 13, 16, 19 (**counting one and leaving two - pattern**)

2, 3, 5, 6, 8, 9, 11, 12, 14, 15, 17, 18, 20(**counting two and leaving one - pattern**)

Like this, introduce different number patterns.

Also, encourage the students to make patterns using beads as given below and reinforce number patterns well.





Patterns in imprints

Materials required: Leaves, lady's finger, lemon, potato, colour mixture, chart -2.

Divide the students into four groups. Give one chart to two groups. Give leaves of two different shapes and colour mixture to the first two groups and pieces of vegetable and colour mixture to the next two groups.

When the teacher says start both the groups with leaves have to take the leaves of different shapes and dip it in the colour mixture and make prints alternately. Similarly, the groups that received the vegetable pieces have to take pieces of different vegetables and dip it in the colour mixture and make prints alternately.

After completing the first round, both groups have to create different print patterns as shown below and display

- Leaves of same shape in two different color combinations, vegetable pieces of same shape in two different color combinations,

- Finger print in two different color combinations

❖ Leaves of three different shape in three different color combinations, three different vegetable slices in three different color combinations.

Learning outcomes

- Create number patterns for numbers upto 20
- Create imprint patterns.
- Recall and create patterns by adding and subtracting odd numbers and even numbers

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	37, 38	42	42	-	-	21, 22
Workbook	4.3	4.3	4.4	4.8	4.9	-

Activity 4

Teacher's time

- Carry out unfinished activities and exercises in this module.
- Check children's textbooks.
- Provide remedial teaching if required.
- Give practice to the children who needs special attention.

Implement any of the above activities as needed or carry out the activities according to the need of your class, children's level and interest.

5 I Know Measurements

16YXU

Learning outcomes

Arumbu

- Differentiate objects based on the properties of comparison as thick-thin, heavy-light long-short, tall-short, more-less and apply them in day-to-day life situations.
- Measure length using non-standard measures.

Textbook Pages 39-47

Mottu

-

Textbook Pages -

Malar

- Understand and apply conversion of gram to kilogram and vice-versa.
- Read the time on a clock.

Textbook Pages 23-29

Note : When teaching this module reinforce the concept of numbers for Mottu students according to the note given in each activity and make them do the workbook exercises.

Activity 1

- Recall numbers from 1 to 99 and carry out the workbook exercises.

Heavier - Lighter

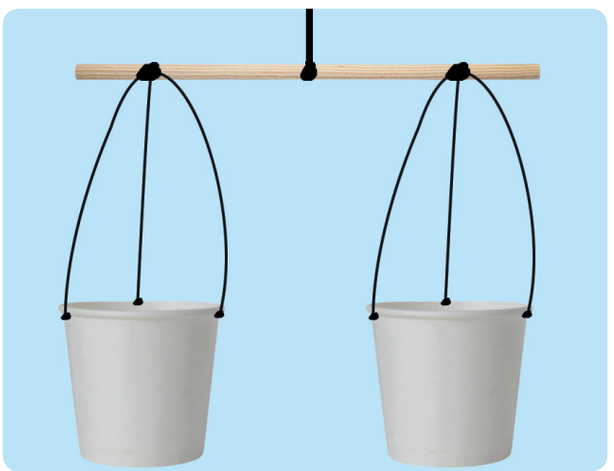
Materials required : Square shaped card / paper cup - 6, thread, straight stick / ruler - 3 and things easily available in surroundings.

Motivation

Put a few thick and thin objects in a yellow bag. Ask the students to come forward one after the other, blindfold and give the yellow bag to her / him. The blindfolded student has to ask, "What do you want? What do you want? "The other students have to sing," We need a thick object or a thin object.

Appreciate and award the students who picked the correct object by giving ★★. Guide the students who find difficult to pick the correct object and give them a ★.

Moment of learning



Divide the students into three groups. Give the required number of the above mentioned objects (Square shaped card / paper cup, straight stick / ruler and thread) to each of the three groups and explain them to make a simple balance by following the steps given below.

Step 1: Make three evenly spaced holes in the brim of each paper cup.

Step 2: Tie threads of equal length through each hole as shown in the picture.

Step 3: Locate the midpoint of the straight stick by measuring with a scale and tie a thread at that point.

Step 4: Now, tie the three threads of each cup together at equal distance from the midpoint of the straight stick/ruler.

The teacher has to explain the method of comparing two objects by using the simple balance. Now, the three groups can use any two objects collected by them and weigh them using the weighing scale prepared by them to find out which is heavier and which is lighter. Appreciate the group which compares more objects quickly and encourage the other groups also to weigh and compare.

Conversion of gram and kilogram

Materials required : Simple balance, 100g packets filled with sand or stones - 24, number cards with 1000g, 2000g... 10000g and 1kg, 2kg.....10kg written on it, 1kg packets of rice, cereals, salt - 3 set.

- Divide the students into 2 groups. Give each group a simple balance, 100 gram packets filled with sand or stones 12, and 1kg packets filled with rice, pulses and salt. Do not say the students about the weight of objects in the big packets. The students have to place the big packet in one side of the simple balance and find how many small packets has to be placed in the other side to balance it and mark in their notebooks. Similarly, they have to find and note for all the three objects. Make them observe the relation between the three objects and realise that 1000 gram makes one big packet.

Ask them, "Shall we measure the weight of the big packet?". Then, the big packet is weighed using the simple balance. Enable the students understand that the weight of one big packet is 1 kilogram and it is equal to 1000 gram.

Draw circles as shown in the picture and write numbers on them. Write 1000g, 2000g,...10000g and 1kg, 2kg,...10kg in 20 paper slips, roll it and place it in a circle in front of the students.

When the teacher says start, a student from the first group has to pick a paper slip quickly from the circle. For example, the student who picks the 5000g card has to stand in the circles in the grams side, hop 5 times and reach the circle appropriate to the number in his card and say 5000g. He has to jump to the circle in the opposite side with 5 kilogram and say 5000g is equal to 5 kilogram.

Similarly, if the next student picks the 3kg card has to stand in the circle in the kilograms side, hop 3 times and reach the circle appropriate to the number in his card and say 3kg. He has to jump to the circle in the opposite side with 3000 gram and say 3kg is equal to 3000gram.

Learning outcomes

- Differentiate objects based on the properties of comparison as thick-thin, heavy-light and apply them in day-to-day life situations.
- Recall the number names from 1 to 99.
- Understand the conversion of gram to kilogram and vice-versa and apply them.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	41, 43	-	-	-	-	23, 24, 25,26
Workbook	-	5.1	5.2	5.1	5.2	-

Project

Ask the students to prepare a list of groceries with quantity used by their family for one day or one week.

Activity 2

- Recall the concept of larger numbers and smaller numbers from 1 to 99 and do the workbook exercises.
- Recall previous day's activities and make the students do the exercises in the workbook.

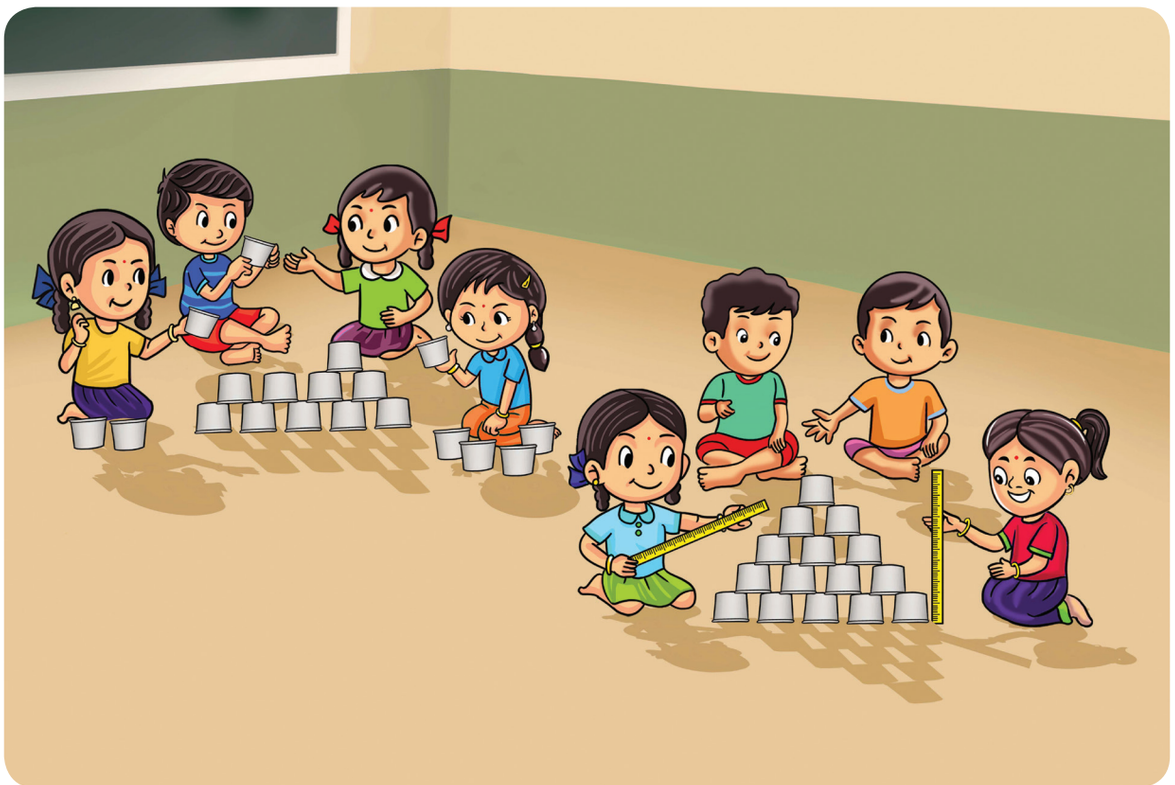
Long – Short

Materials required : Straw – 40, Paper cups – 40

- Divide the students into two groups and give 20 straws each. When the teacher says "Start", the groups have to start joining the straws. After one minute, when the teacher signals, they have to stop joining the straws. Now, the group which has joined the straws longer than the other wins

Note: Straws can be made by rolling paper on a pencil.

Tall – Short



As in the above activity, give each group 20 paper cups and ask the students to make a paper cup tower. The group that builds the highest paper cup tower wins.

Learning outcomes

- Differentiate objects based on the properties of comparison as long-short, tall-short and apply them in day-to-day life situations.
- Recall the comparison of numbers upto 99.
- Understand the conversion of gram to kilogram and vice-versa and apply them.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	40, 42	-	-	-	-	-
Workbook	-	5.3	5.4	5.3	5.4	5.5

Activity 3

- Recall the concept of ascending and descending order of numbers from 1 to 99 and do the workbook exercises.

- Recall previous day's activities and make the students do the exercises in the workbook.

More – Less

Materials required : Buckets and water bottles.

- Draw five long lines on the ground. Place a bucket of water at one end of each line and an empty bottle at the other end. Call five students and ask them to stand one student per bucket.

When the teacher says "Start," the students should collect water in their cupped palms from the buckets near them and run to fill the bottle at the end of the line. After a while, when the teacher says "Stop," the students have to stop filling the bottle with water.

Now, compare the water in each bottle to find out who has filled more water and who has filled less water. Students can be helped to compare which is more and which is less. All the students have to be given the opportunity to do this activity.

Learning outcomes

- Differentiate objects based on the properties of comparison as more-less and apply them in day-to-day life situations.
- Recall the concept of ascending and descending order in numbers upto 99
- Understand the conversion of gram to kilogram and vice-versa and apply them.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	44	-	-	-	-	-
Workbook	-	5.5	5.6	5.6	5.7	5.8

Activity 4

- Recall forming 2-digit numbers using one digit numbers and do the work book exercises.

Sorting objects based on their size

Materials required : Leaves, stones, sticks and pencils of different sizes.

- Divide the students into four groups. Give the following objects to them as follows.

Group 1 : Sticks

Group 2 : Leaves

Group 3 : Stones

Group 4 : Pencils

Ask the groups to arrange the objects given to them by their size and then discuss in class about the arrangements made by them.

Reading time on the clock

Instruct the students to sit in a circle with number cards 1 to 12. Call two students and give one student the long stick (minute hand) and give the other student the short stick (hour hand). The teacher has to say that in the clock the long hand (minute hand) shows the time in minutes and the short hand (hour hand) shows the time in hours. For example, introduce that if the time is 3 o' clock, the hour hand will be at 3 and the minute hand will be at 12, using the sticks. Likewise, introduce the time from 1 o' clock to 12 o' clock, by pointing the sticks to the appropriate numbers.

Then, the teacher has to say the time and the students have to place the hands of the clock accordingly.

Note: The student with the long stick has to stand pointing at 12 alone. The student with the short stick has to change her/his position alternately according to the change in hours.

Learning outcomes

- Sort objects based on their size.
- Recall the formation of 2-digit numbers using single digit numbers.
- Read the time on a clock.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	45	-	-	-	-	28
Workbook	-	5.7	5.8	5.9	5.10	-

Activity 5

- Recall addition with regrouping, sum not exceeding 99 and do the workbook exercises.
- Recall previous day's activities and ask the students to do the exercises in the workbook

Measure length using Non-Standard Measures

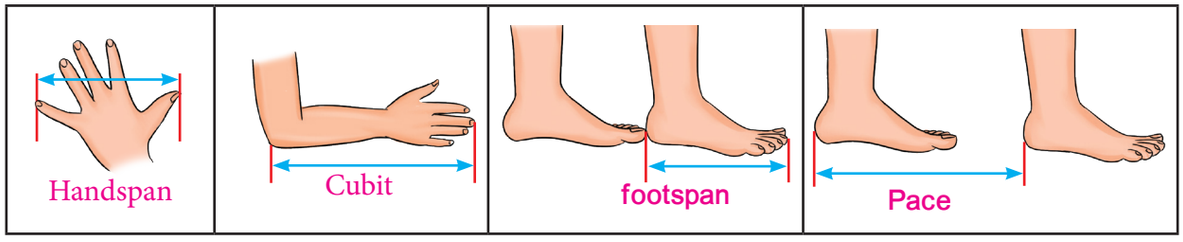
Materials required: Charts with pictures illustrating handspan, cubit, footspan, pace, colour paper ball or sponge ball.

- Divide the students into four groups. Draw a line in the ground. Ask one student from each group to come forward and throw the ball standing on the line. Note the places where the ball fell down. The group which has thrown the ball to the longest distance is the winner.

Group – 1		
S. No	Student's Name	Number of Paces
1		
2		
3		
4		

Now ask the students, "Shall we measure the distance to which the winning group has thrown the ball?" and draw a straight line with the help of a rope connecting the starting point of the throw and the landing point of the ball.

Place the picture cards upside down near the straight line in which the words like handspan, cubit, footspan and pace are written. Call the first group and ask them to choose a card. Explain the students how to measure according to the measurement in the card chosen by them. Then, ask all the students in the first group to measure the distance of the straight line individually.



For example, if the first group has chosen pace, explain them what pace means and how to measure with it. Then, ask all the students in the group to measure and tabulate it as follows. Ask them to observe the table and help them understand that the measurement differs with each person.

Likewise, ask the successive groups to choose a card, make them measure according to the measuring method in the card and tabulate them. While they do, explain them that measuring by handspan, cubit, footspan and pace differs with every student.

Learning outcomes

- Measure length using non-standard measures.
- Recall addition not exceeding 99 with regrouping.
- Read the time on a clock.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	47	-	-	-	-	29
Workbook	5.1	5.9	5.10	5.11	5.12	-

Activity 6

Teacher's time

- Carry out unfinished activities and exercises in this module.
- Check children's textbooks.
- Provide remedial teaching if required.
- Give practice to the children who needs special attention.

Implement any of the above activities as needed or carry out the activities according to the need of your class, children's level and interest.

6 Information processing

VP3N9

Learning outcomes

Arumbu

-

Textbook Pages
-

Mottu

-

Textbook Pages
-

Malar

❖ Draw a route map and find the quickest routes.

Textbook Pages
30-34

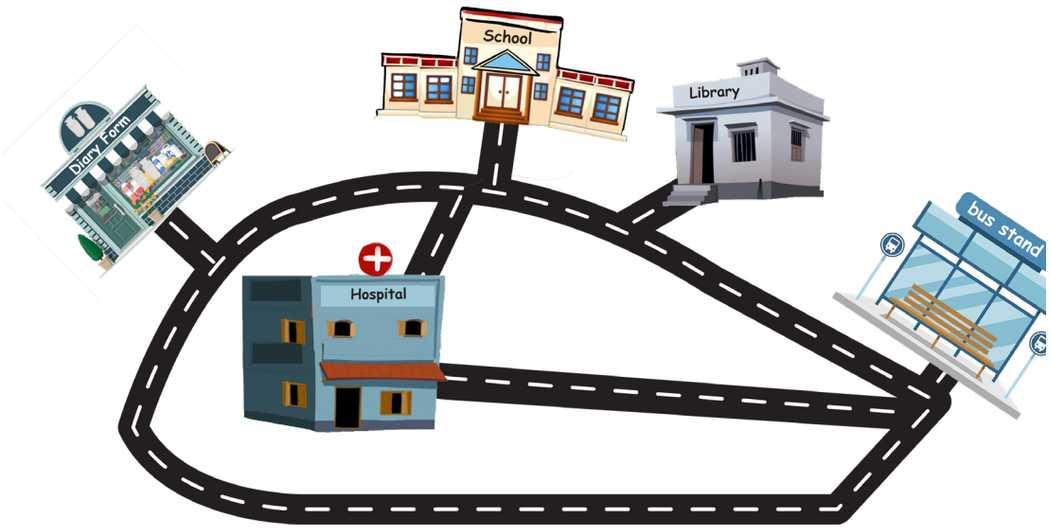
Note : When teaching this module, reinforce the concept of numbers for arumbu and mottu students according to the note given in each activity and make them do the workbook exercises.

Activity 1

- Recall the numbers from 1 to 20 and do the workbook exercises
- Recall addition with regrouping sum not exceeding 99 and ask the students to do workbook exercises.

Route map

- Discuss with the students and draw a map of the school and its surroundings on the blackboard as shown below. Then discuss by asking the following questions.



- On the right side of which place is the school situated ?
- Which place is to the left of the school?
- Which place is located to the right of the dairy farm?

Then divide the students into two groups. Make them draw a map of the classroom and ask them to visualise it.

Make the students to observe the route map drawn on the blackboard. Next, ask them the following questions, discuss and find the route.

- In which way can you go from school to bus stop?
- What are the places on the way from the bus stop to the dairy farm?

Learning outcomes

- Recall numbers from 1 to 20.
- Recall addition sum not exceeding 99.
- Draw a route map and find the fastest way to reach the destination.

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	-	-	-	-	-	31, 32
Workbook	6.1, 6.2, 6.3	6.1	6.2	6.1	6.2	6.3

Activity 2

- Recall addition problems sum not exceeding 20 and do the workbook exercises.
- Recall subtraction with regrouping up to 99 and do the workbook exercises.

Create and follow instructions

Materials Required: Yellow cloth bags – 5 (One bag with treasure)

- Divide the students into two groups. Draw 5 × 5 squares inside the classroom or on the playground and place × mark in some squares. Tell the students that they should not go through these × marked squares and they can only go through the other squares.

When the teacher says, "Start", two students from the first group have to come forward. One of them has to stand on the green dotted square and the other has to stand next to the teacher. The second group has to place the yellow cloth bags in the squares of their choice.

The teacher secretly has to tell the student next to him in which bag the treasure is. After hearing this, the second student will give hints like "left side/ right side/ forward/backward" along with the number of squares and guide the first student to get to the treasure bag.

For example, if the teacher says that the treasure bag is in the 3rd square of 5th row, the second student has to give hints as follows and guide the student in the green dotted square to take the treasure.

Method 1	Method 2
Go 3 squares forward.	Go 1 square forward.
Turn left and go 2 squares forward.	Turn left and go 2 squares forward.
Turn right and go 1 square forward.	Turn right and go 3 squares forward.

Learning outcomes

- Recall addition sum not exceeding 20.
- Recall subtraction of numbers upto 99.
- Create instructions and follow them

Workbook Activities

	Arumbu	Mottu		Malar		
Textbook Pages	-	-	-	-	-	33, 34
Workbook	6.4, 6.5, 6.6	6.3, 6.5	6.4, 6.6	6.4	6.5	-

Activity 3

Teacher's time

- Carry out unfinished activities and exercises in this module.
- Check children's textbooks.
- Provide remedial teaching if required.
- Give practice to the children who needs special attention.

Implement any of the above activities as needed or carry out the activities according to the need of your class, children's level and interest.

SCIENCE & SOCIAL SCIENCE

Science

1 Plants

Learning Outcomes

- Identify the parts of a plant.
- Know and identify the types of root.
- Know how plants absorb water and transport it to other parts.
- Know and classify water plants and land plants.
- Know about the parts of plants in which food is stored.

Textbook : 58 - 70

Activity 1

Do you know us?

I am your teacher, Iniya. I saw different types of plants on my way to school from the house. I took a plant along with its root. I know about the parts of that plant. Can you also take a plant and identify its parts?

Learning outcome Identify the parts of a plant.

Text book and work book activities

Textbook	Workbook
Page number: 58	Exercise number: 1.1

Activity 2

Find out! Find out!

Materials Required : Coconut shells (2), a little amount of green gram and a little amount of paddy.

I filled soil in two coconut shells. I put green gram in one shell and paddy in another shell, watered them and kept them in sun light. After one week I took the plants grown in the shells and analysed the root structure of those plants.

Would you also analyse them? Are these roots look similar?

A large single root growing down from the stem of the plant is called tap root.

Thin and branched roots that grow from the base of the stem are known as fibrous roots.

How was the root of the plant that you observed?

Learning outcome

Know and identify the types of root.

Activity 3

From where to where?

Materials Required : Glass jar, water, red ink and balsam plant or any other plant with soft stem.

I took a little amount of water mixed with red ink in a glass jar. I kept the balsam plant with its root in the glass jar filled with red coloured water. When I saw it after a few minutes, its stem had become red.

How did the stem of the plant turn red?

Observe and analyze that.

The root absorbs the water and transports it to different parts of the plant. Since the root transports the red colour water to the stem, it becomes red.

Learning outcome

Know how plants absorb water and transport it to other parts of the plant.

Text book and work book activities

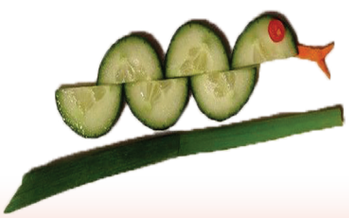
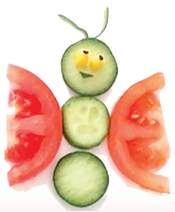
Textbook	Workbook
Page No: 62 Let us write	Exercise number 1.2, 1.3

Activity 4

I can do what I like

I made the models of different types of flowers, animals and birds using the vegetables available at home. You can also make one like that.



Text book and work book activities

Textbook	Workbook
-	Exercise number: 1,5,1,6

Activity 5

I can count and know

I took some fruits which are easily available and checked whether they contain only one seed or many seeds, and classified them. You can classify it like that too.

Text book and work book activities

Textbook	Workbook
Page No: 63 Think and Write	Exercise number: 1.5, 1.6

Activity 6

Land or Water?

I saw a few plants. Among them some grow in water and some grow in land. Have you ever seen them? If yes, classify them.

Learning outcome

Know and classify water plants and land plants.

Text book and work book activities

Textbook	Workbook
Page No: 66 Let us connect, Let us try	Exercise number: 1.5

Activity 7

Where is the food?

I saw a few vegetables. I classified them based on whether they are root, stem or leaf. Would you like to classify the vegetables as I did?

(Make the students observe the vegetables and classify them. Guide them whenever necessary.)

Learning outcome

Know about the parts of plants in which food is stored.

Text book and work book activities

Textbook	Workbook
Page No: -	Exercise number 1.6,1.7

SOCIAL SCIENCE

1 HISTORICAL PLACES

Learning Outcome

- List the historical places in Tamil Nadu.
- Recognise the picture and name the place in Tamil Nadu.
- Understand that every historical place has a history.

Note

Three activities have been given in the lesson titled 'Historical Places'. Teacher has to explain one activity every day, guide and motivate the students to carry out the activities mentioned in 'Let Us Travel' section of the textbook and the workbook for that day. Also, show the videos provided in QR code to the students (give students reading or writing exercises from textbook activities).

Activity: 1

I will say the names of historical places

6FJDX

What places did you see in the video? Tell them one by one.

Learning Outcome List the historical places of Tamil Nadu.

LET US TRAVEL – 1

TEXTBOOK	WORKBOOK
Page No: 76 (Activity)	Exercise No: 1.1

Activity: 2

I saw! I knew!

You saw in the video historical places like Mahabalipuram, Fort St. George, Vivekananda Rock, Thiruvalluvar Statue, Thanjavur Big Temple and Gingee Fort. Can you say, where they are located?

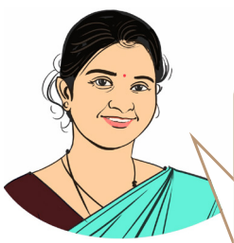
Learning Outcome Recognise the picture and name the place in Tamil Nadu.

LET US TRAVEL – 2

TEXTBOOK	WORKBOOK
Page No: 79 (Activity), 85	Exercise No: 1.2

Activity 3

I will know the history



Now you have learnt about historical places through the video. Each one of you tell one or two sentences about the historical places that you liked.

Learning Outcome Understand that every historical place has a history.

LET US TRAVEL – 3

TEXTBOOK	WORKBOOK
Page No: 85	Exercise No: 1.3

2 DISTRICT ADMINISTRATION

Learning Outcome

- Understands how a district functions and know about different departments working in the district.

Note

The teacher has to explain the two activities in the lesson titled 'District Administration', Guide and motivate the students to do the activities of the day mentioned in 'Let Us Travel' section of the textbook and the workbook.

Activity: 1

Let us know about administration

Teacher has to ask the following questions to the students and introduce the departments like Education, Social Welfare, Local Body, Health and Electricity which helps the school and its administration.

Health Department

Who will do the medical check up in the school for the students during the medical camp?
Do you know which department they belong to?

Electricity Department

What kind of things are there in our classroom?
What do you need to make the fan, light, television and computer work?
If there is a power outage, who will come and help us?
Do you know which department they belong to?

Social Welfare Department

Who cooks mid-day meals for our school?
Who buys the groceries for cooking?
Do you know which department they belong to?

Local Body Department

Who does the cleaning work in our school?

Who gives us the drinking water connection?

Which department are they in?

Education Department

Who teaches you?

Who is in charge of our entire school?

Which department are they in?

Thus, a school needs the help of many departments to function. Likewise, for our district to function well, we need the help of many departments. Enable the students know that it is the District Collector who helps all these departments to function effectively, and introduce them about the District Collector and his responsibilities.

Follow-up Activity

Ask the students to collect the information from the elders at home about any two of the government departments in their district.

Learning Outcome

Understands how a district functions and know about different departments working in the district.

LET US TRAVEL – 1

TEXTBOOK	WORKBOOK
Page No: 102, 106	Exercise No: 2.1, 2.2

ENNUM EZHUTHTHUM – Classes 1, 2 & 3 – MATHEMATICS – TERM - II

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Annexure

1. Formative Assessment (a) - FA (a)

Module	Teacher's Hanbook	Texbook \ Workbook		
		Arumbu	Mottu	Malar
1. I Know Shapes	1, 2	5, 7, 10	1.2, 5	1.1, 1.2, 1.3
2. I Know Numbers - I	3, 5	2.3, 22, 25	2.1, 2.2	2.1, 2.2, 2.5
3. I Know Numbers - I I	2	3.3, 3.4, 31	3.1, 30, 31	3.4, 3.5, 3.6
4. I Know Patterns	1, 3	4.1, 4.3, 33, 37	4.4, 42, 45	4.8, 4.9, 21
5. I Know Measurements	1, 2	5.1, 41, 42	-	5.3, 5.4, 5.5
6. Information processing	1, 2	-	-	6.1, 6.2, 6.3

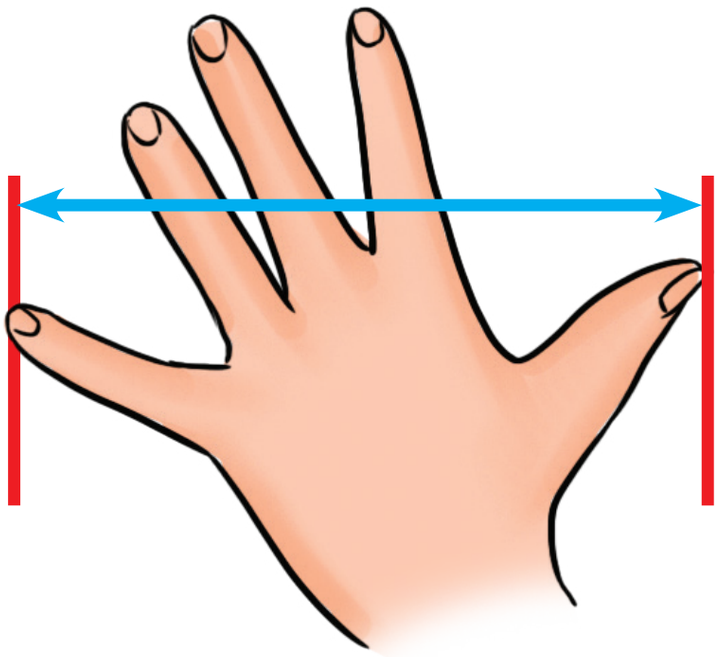
2. Learning outcomes

Module	Arumbu	Mottu	Malar
1. I Know Shapes	❖ Identify 2D shapes. ❖ Know types of straight lines and apply.	❖ Know the properties of 2D shapes. ❖ Recall the types of straight lines and curved lines and apply them.	❖ Recall the properties of 2D shapes. ❖ Recall the types of straight lines and curved lines and apply them.
2. I Know Numbers - I	❖ Know numbers from 10 to 20. ❖ Compare numbers up to 20 and identify big and small number. ❖ Compare numbers and find before number, after number and number in between.	❖ Know numbers names upto 99. ❖ Compare numbers up to 99 and identify big and small number. ❖ Arrange numbers in ascending order and descending order.	❖ Know the need for multiplication and use the multiplication symbol. ❖ Know and apply multiplication tables of 2, 3, 4, 5, 10.
3. I Know Numbers - I I	❖ Able to add numbers, sum not exceeding 20.	❖ Able to add numbers, with regrouping (sum not exceeding 99). ❖ Able to subtract numbers up to 99, with regrouping.	❖ Know and apply multiplication tables of 6 to 9. ❖ Solve multiplication problems related to day-to-day life situations.

Module	Arumbu	Mottu	Malar
4. I Know Patterns	❖ Create patterns in body movements and shapes. ❖ Create pattern in numbers.	❖ Recall and create patterns in shapes ❖ Create patterns using imprints	❖ Create patterns while adding and subtracting odd numbers and even numbers.
5. I Know Measurements	❖ Differentiate objects based on the properties of comparison as thick-thin, heavy-light long-short, tall-short, more-less and apply them in day-to-day life situations. ❖ Measure length using non-standard measures.	–	❖ Understand and apply conversion of gram to kilogram and vice-versa. ❖ Read the time on a clock.
6. Information processing	–	–	❖ Draw a route map and find the quickest routes.

Note : The pink coloured learning outcomes have to be treated as critical learning outcomes.

Handspan



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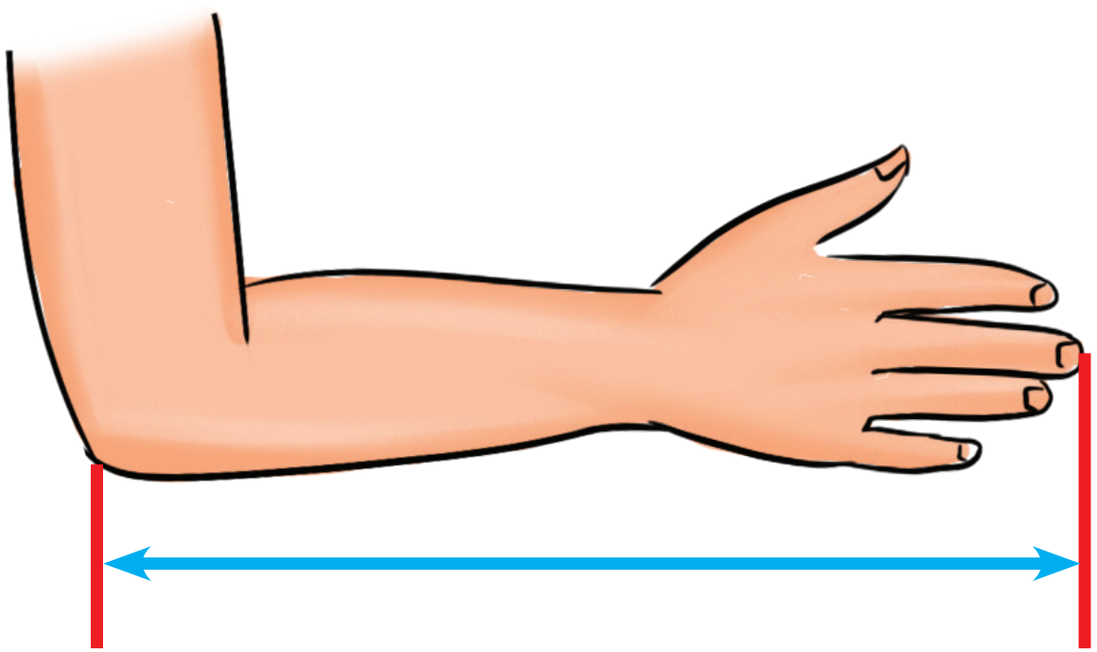

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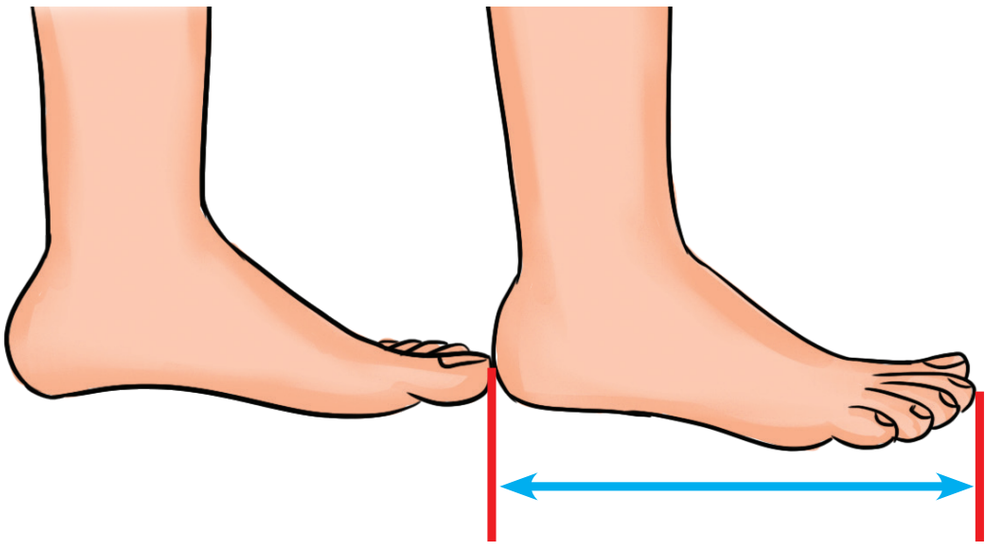
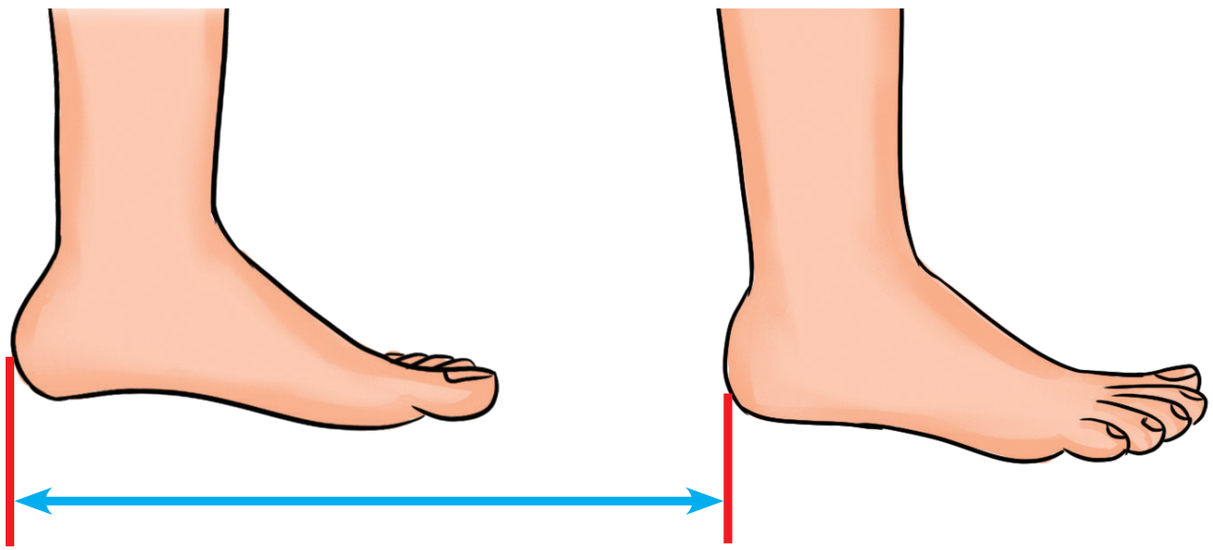
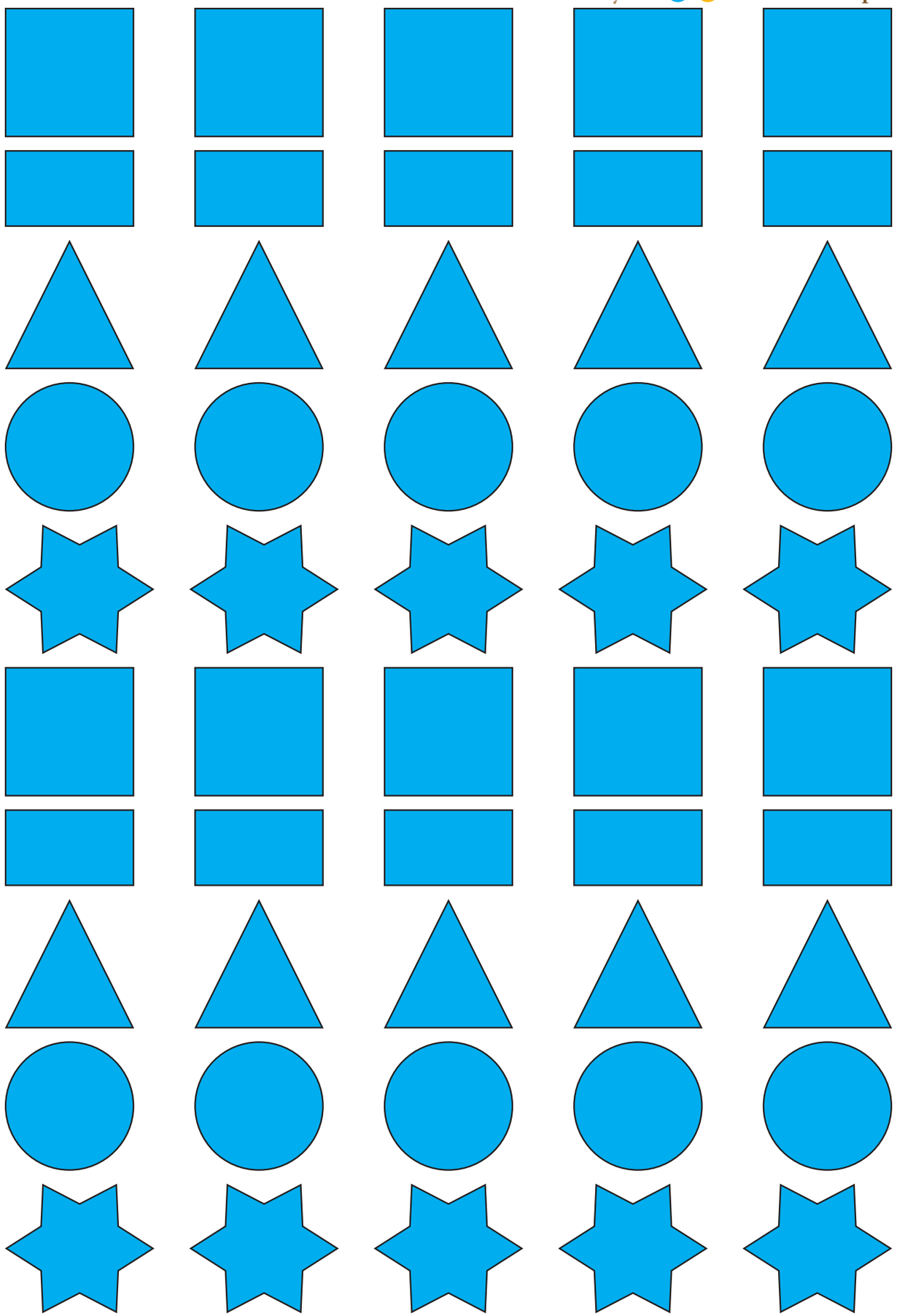


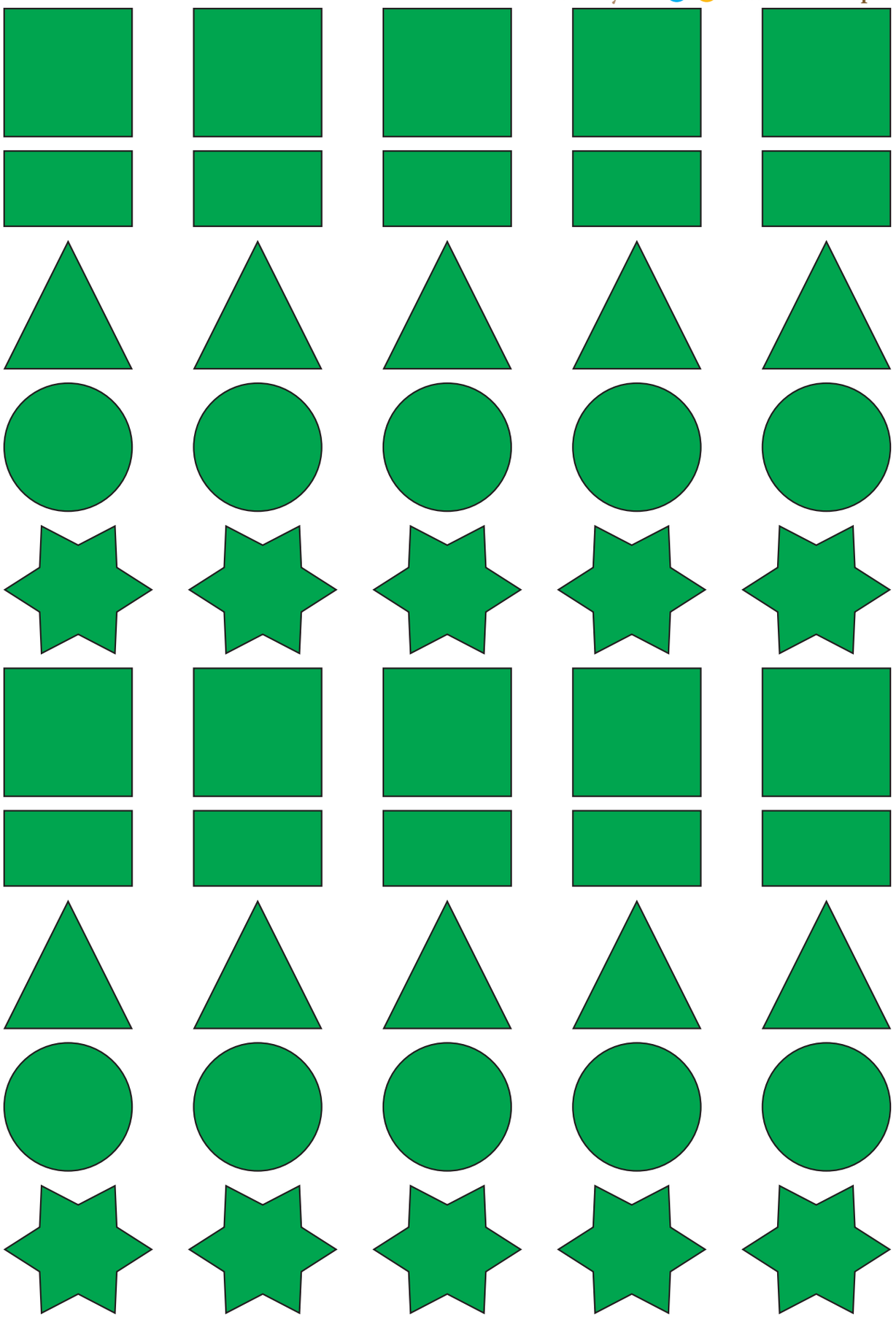
Pace

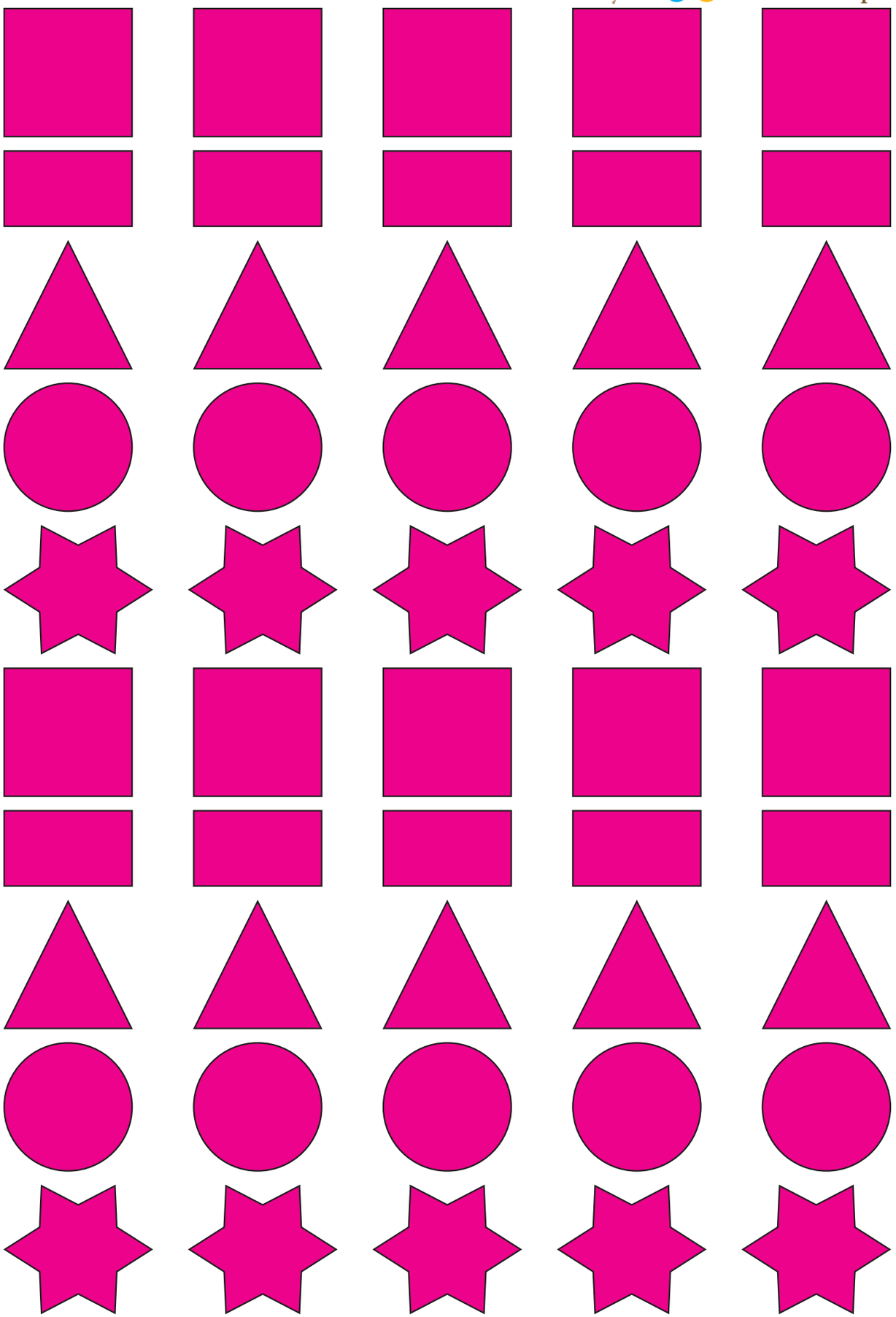


1000g	2000g
3000g	4000g
5000g	6000g
7000g	8000g
9000g	10000g

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







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6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	48	56	63	70
8	8	16	24	32	40	48	56	64	72	80
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96	97	98	99	100

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44 + 57 =

80 + 16 =

25 + 49 =

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30 + 20 =

45 + 54 =

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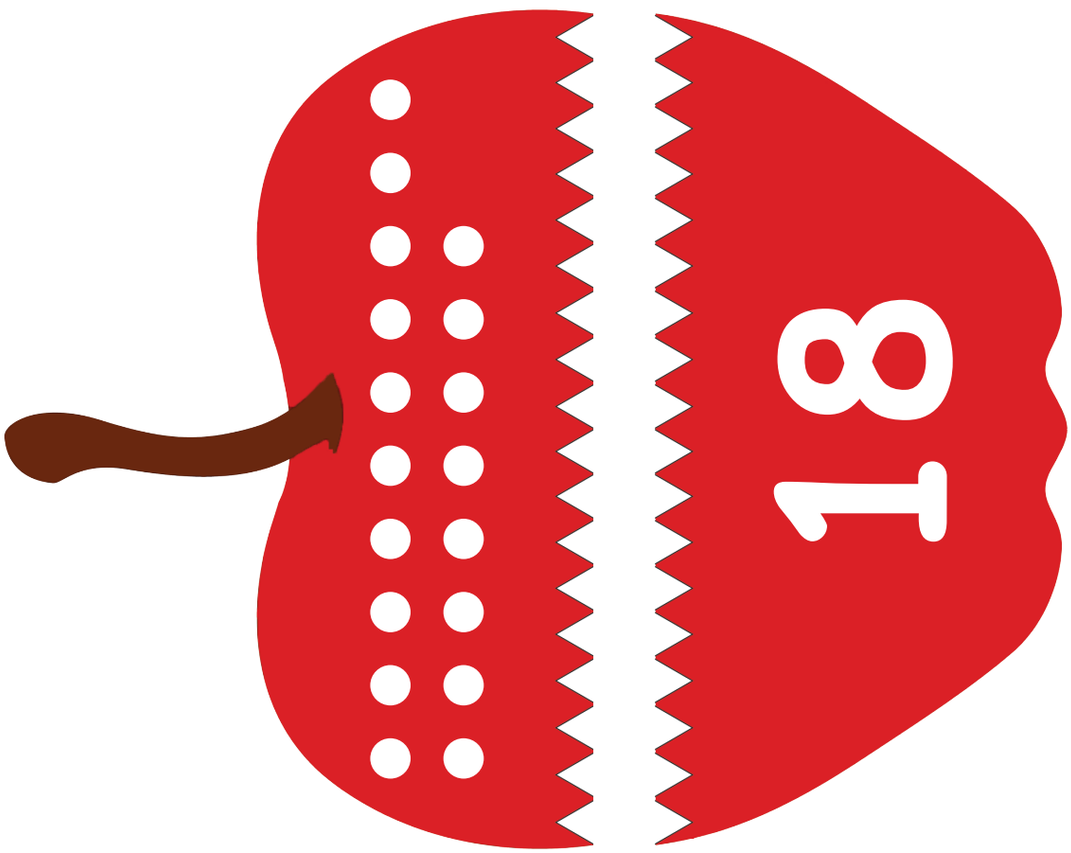
7 + 10 =

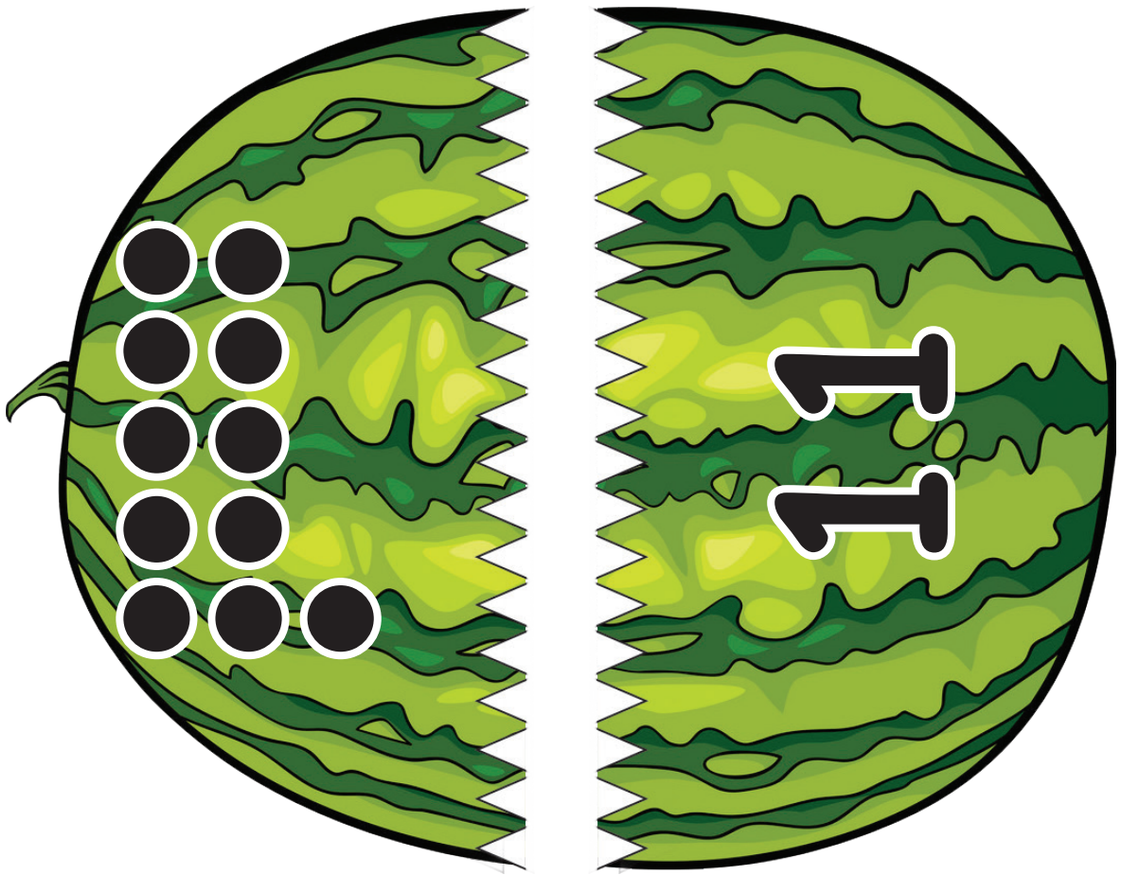
8 + 7 =

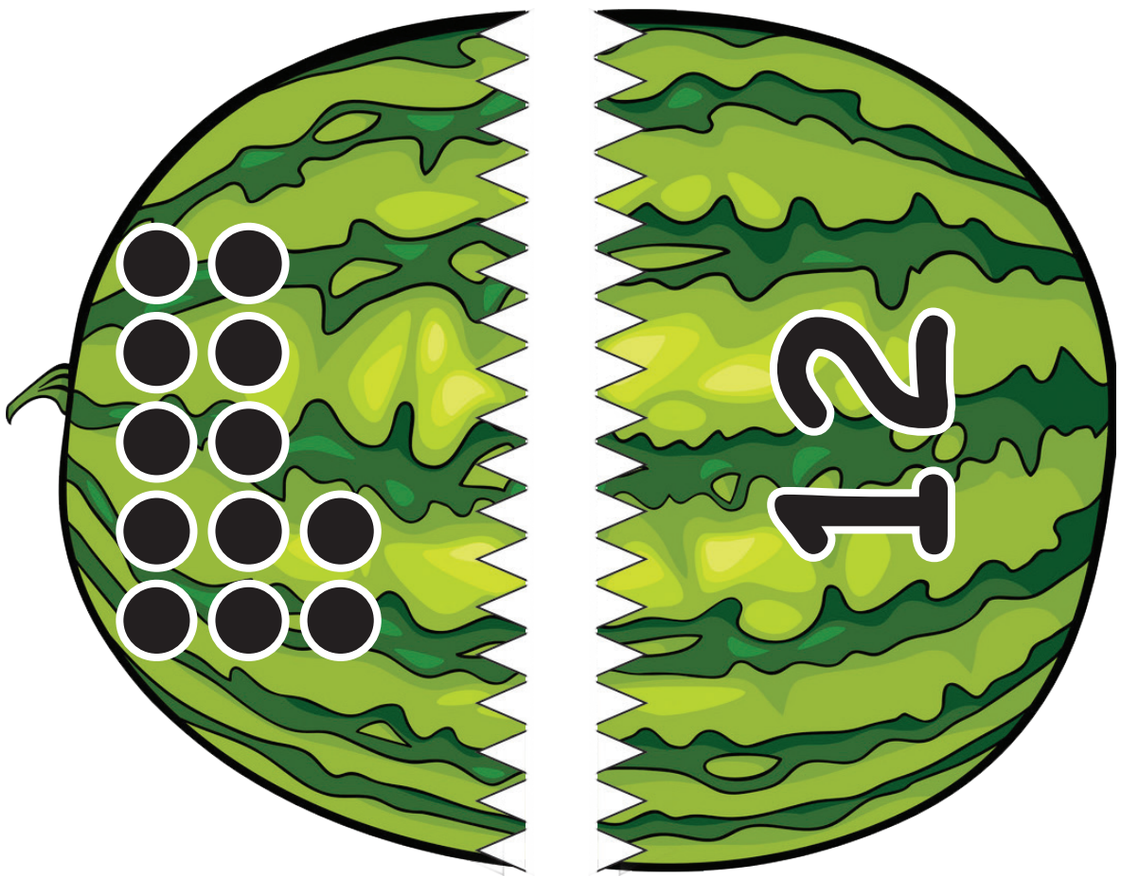
6 + 12 =

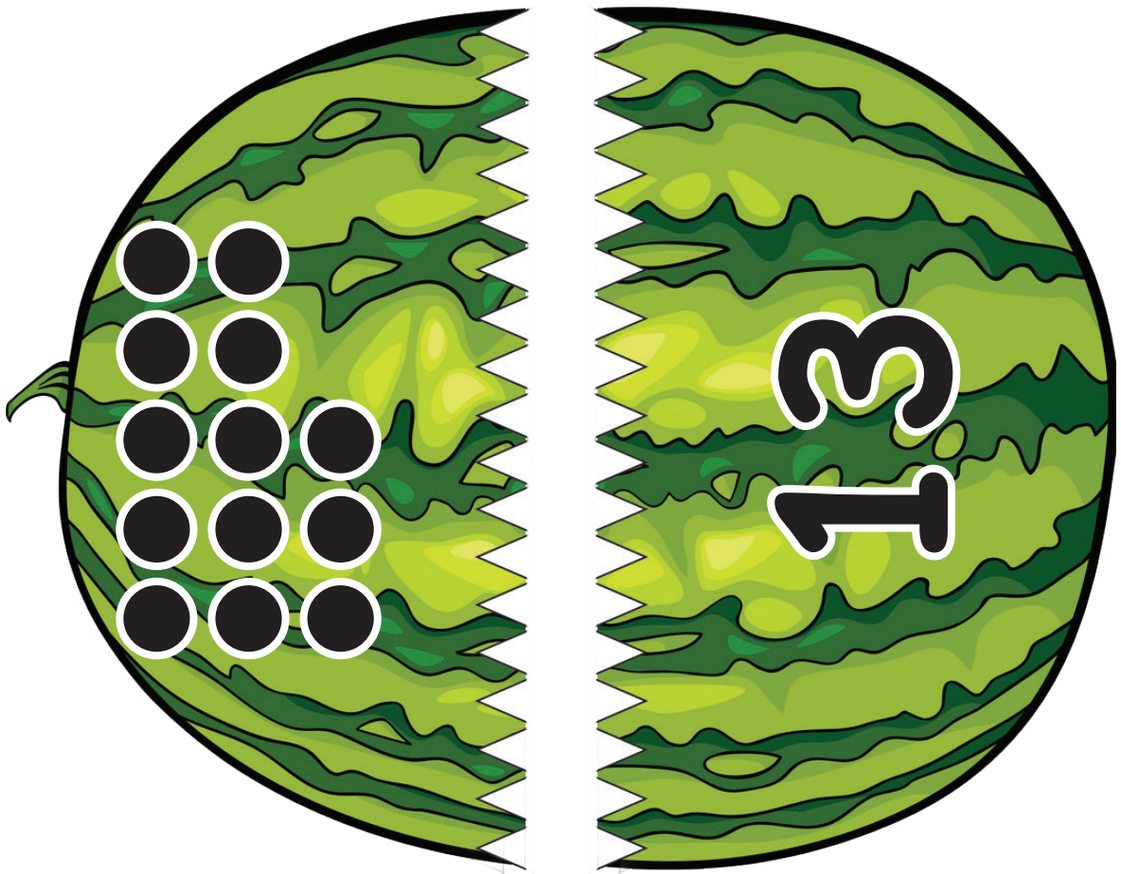
4 + 9 =

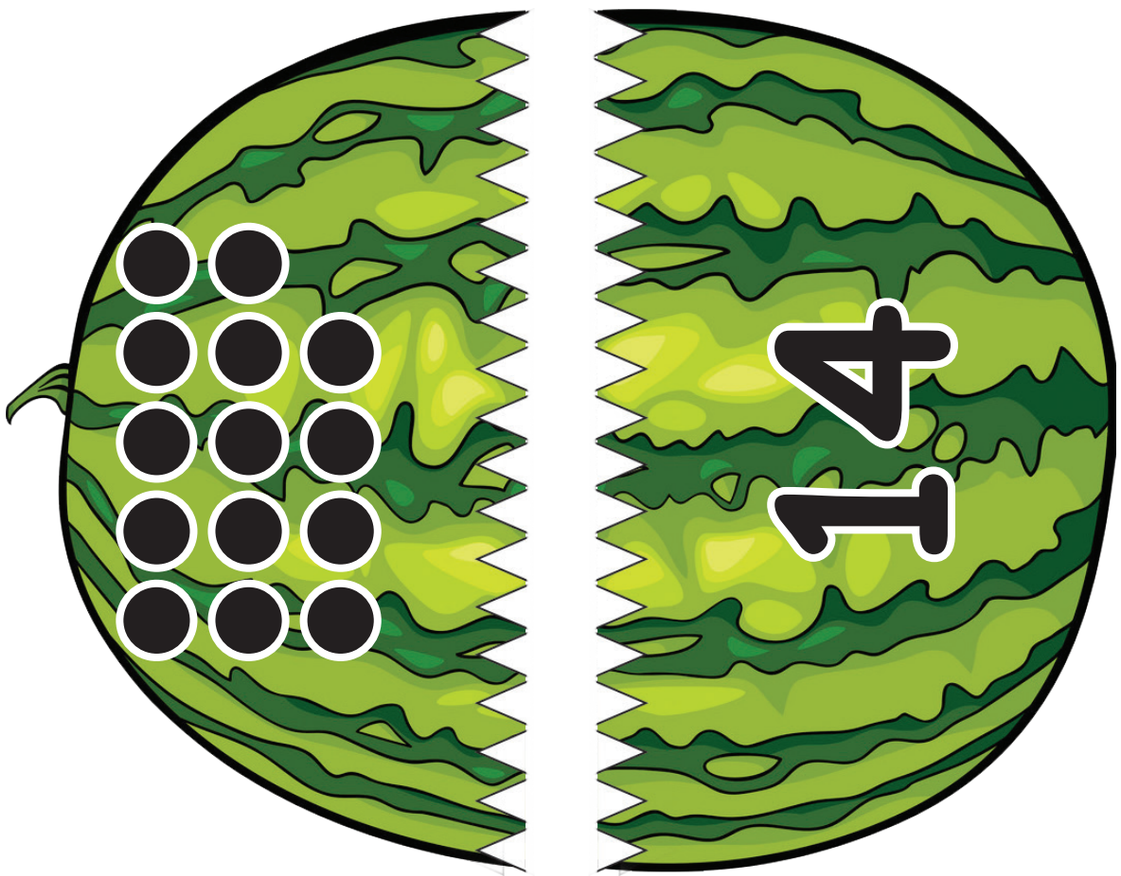
3 + 15 =

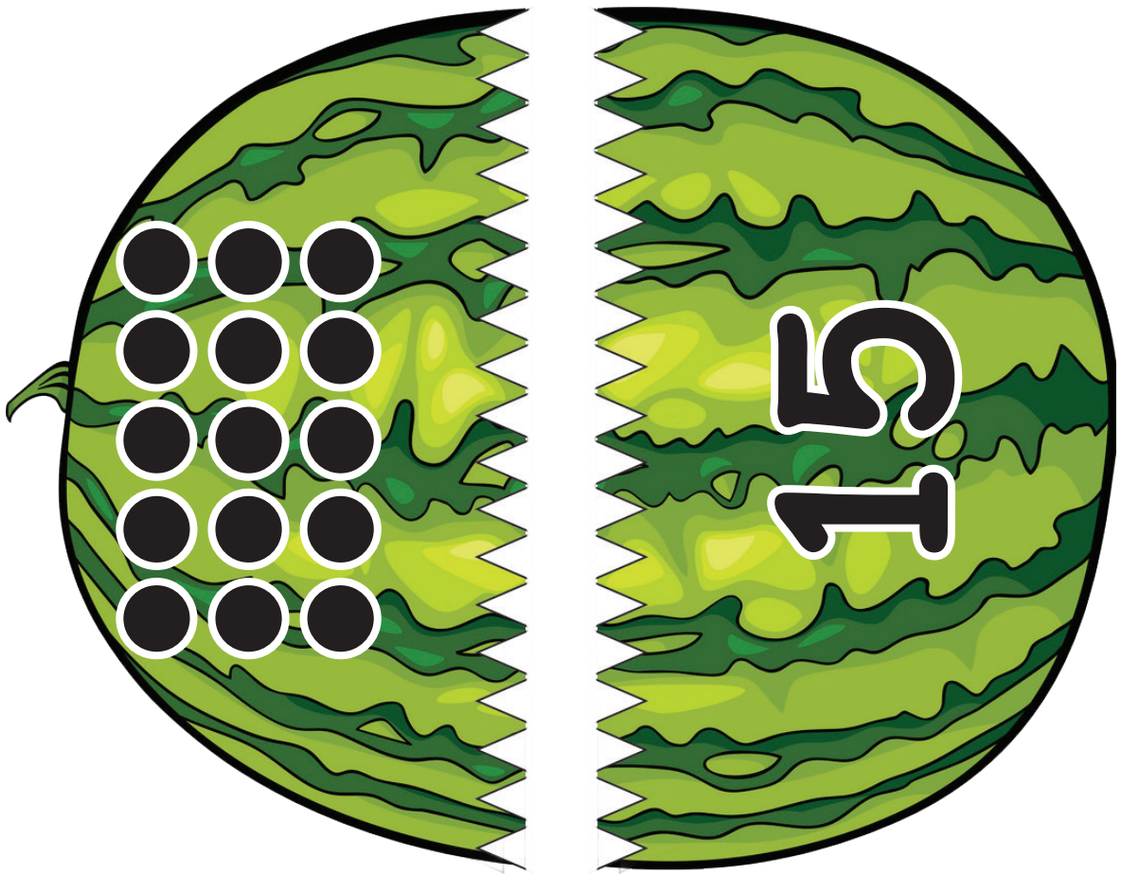


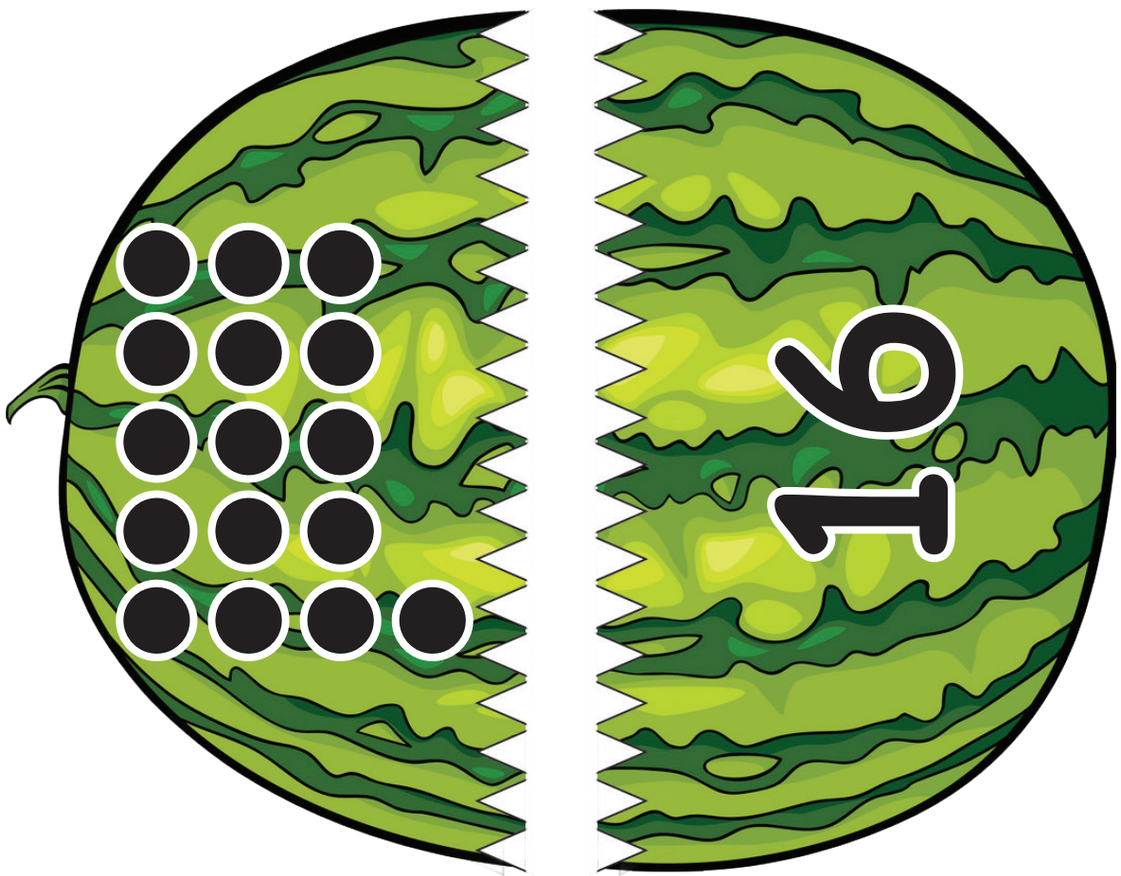


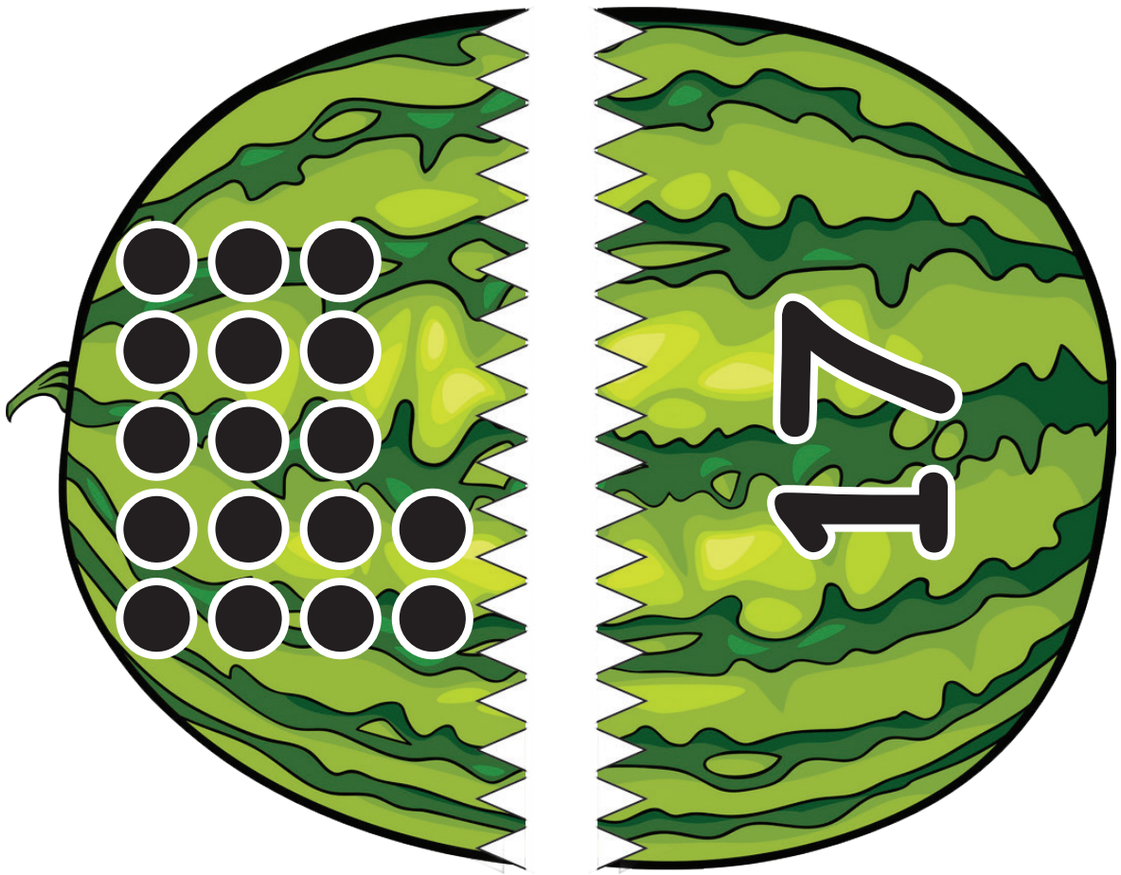


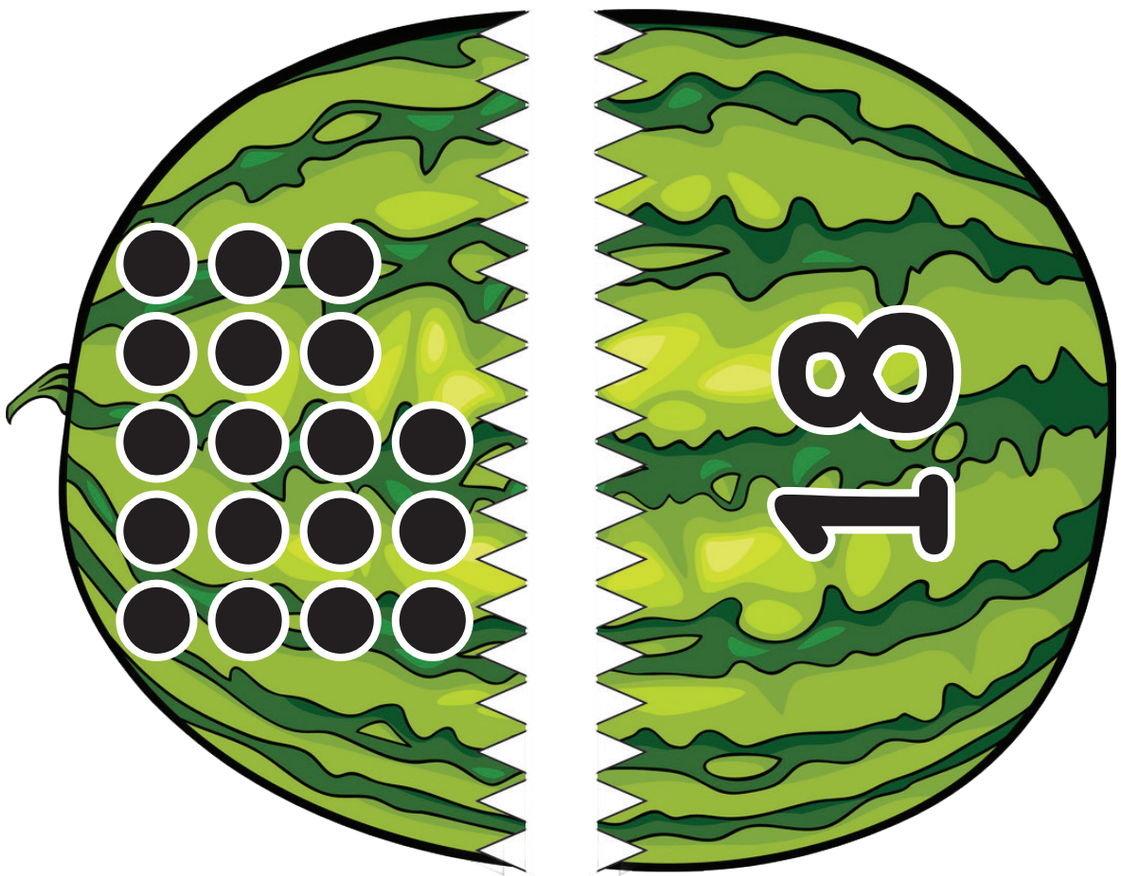


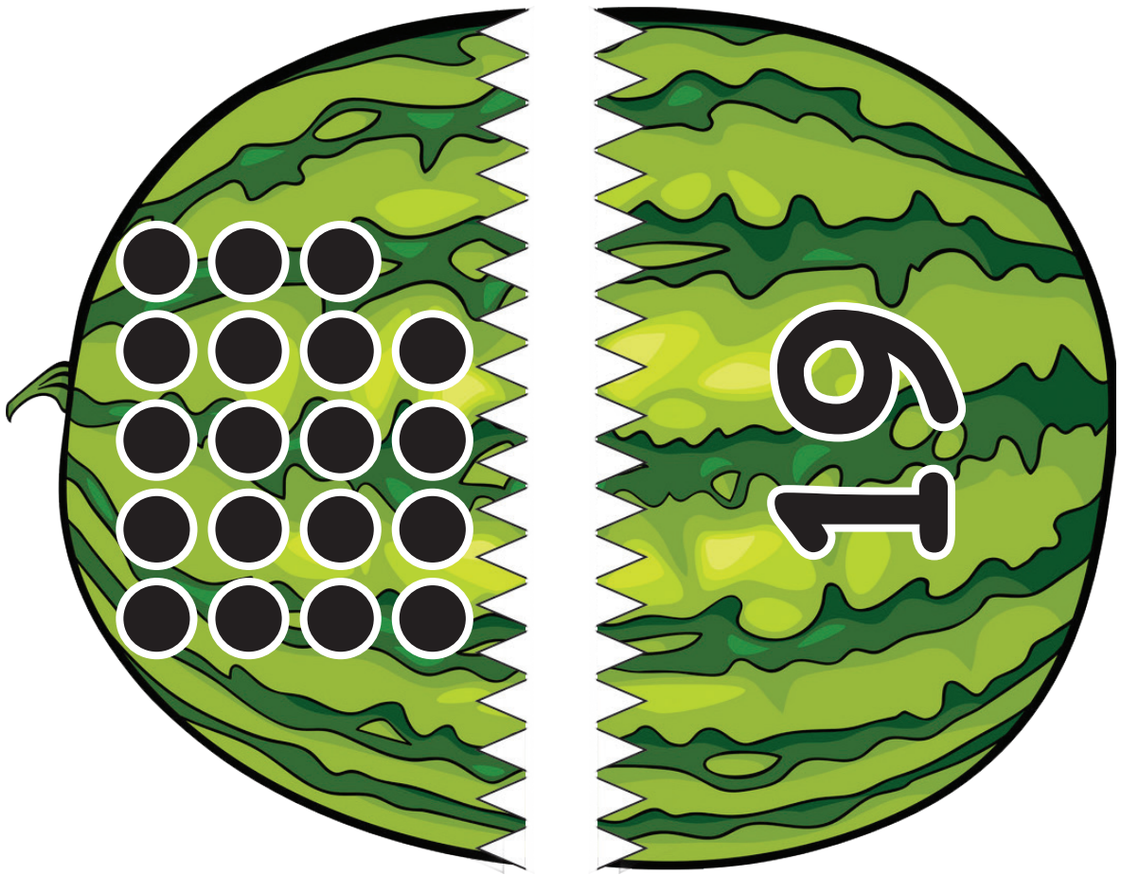


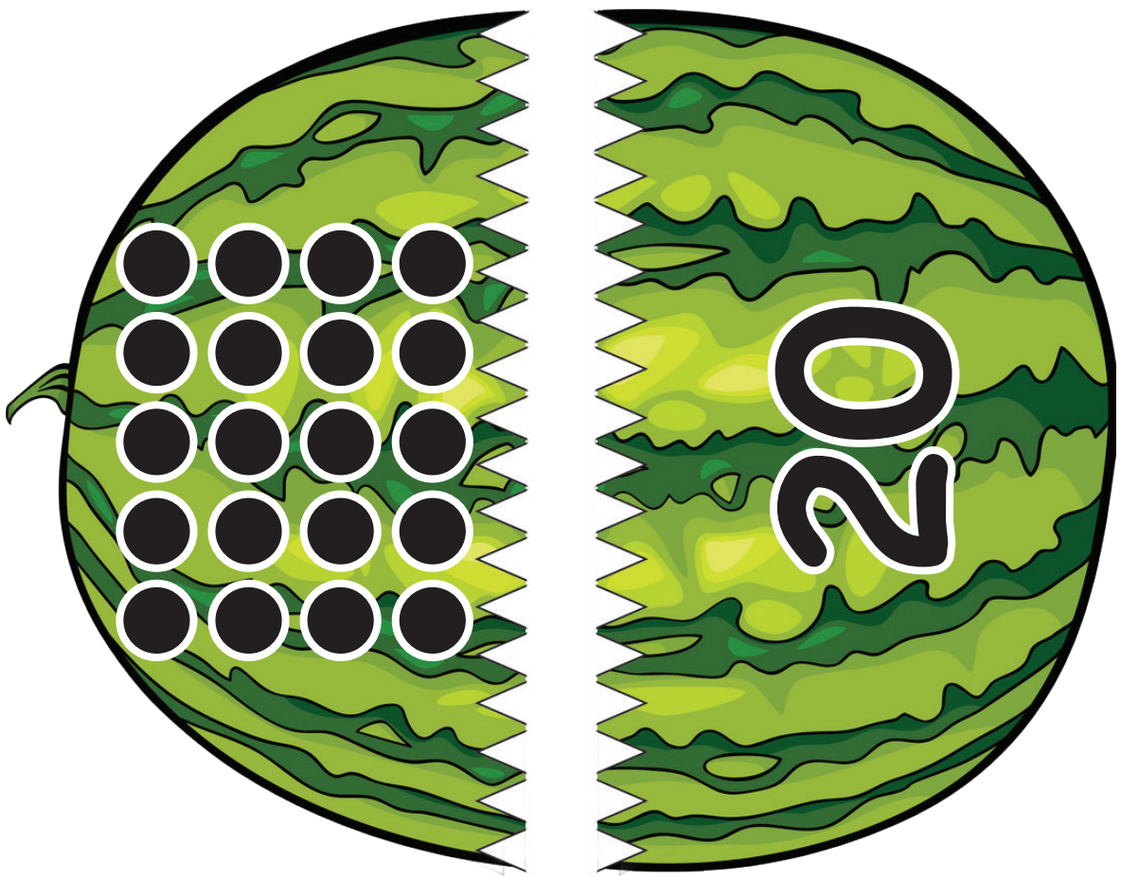












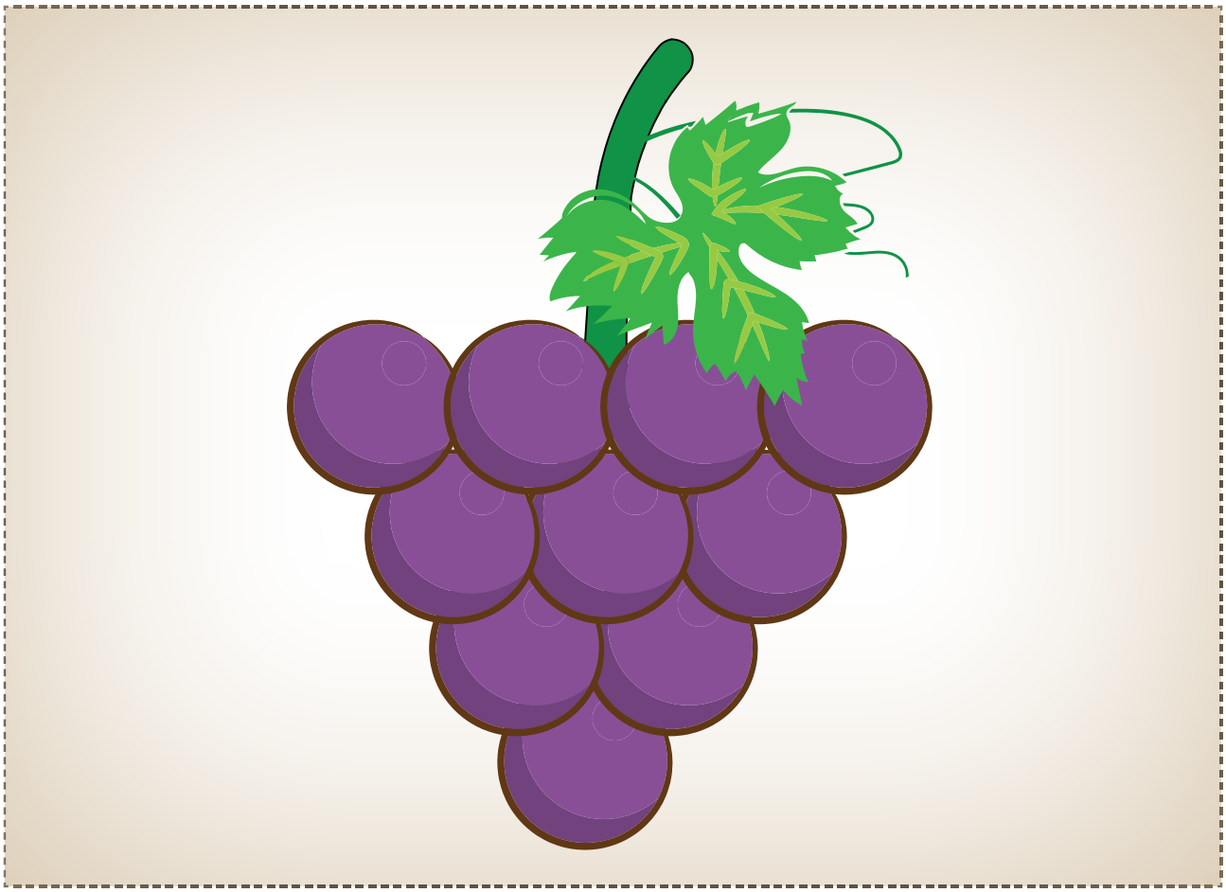
1 One	2 Two
3 Three	4 Four
5 Five	6 Six
7 Seven	8 Eight
9 Nine	10 Ten
11 Eleven	12 Twelve
13 Thirteen	14 Fourteen
15 Fifteen	16 Sixteen
17 Seventeen	18 Eighteen
19 Nineteen	20 Twenty

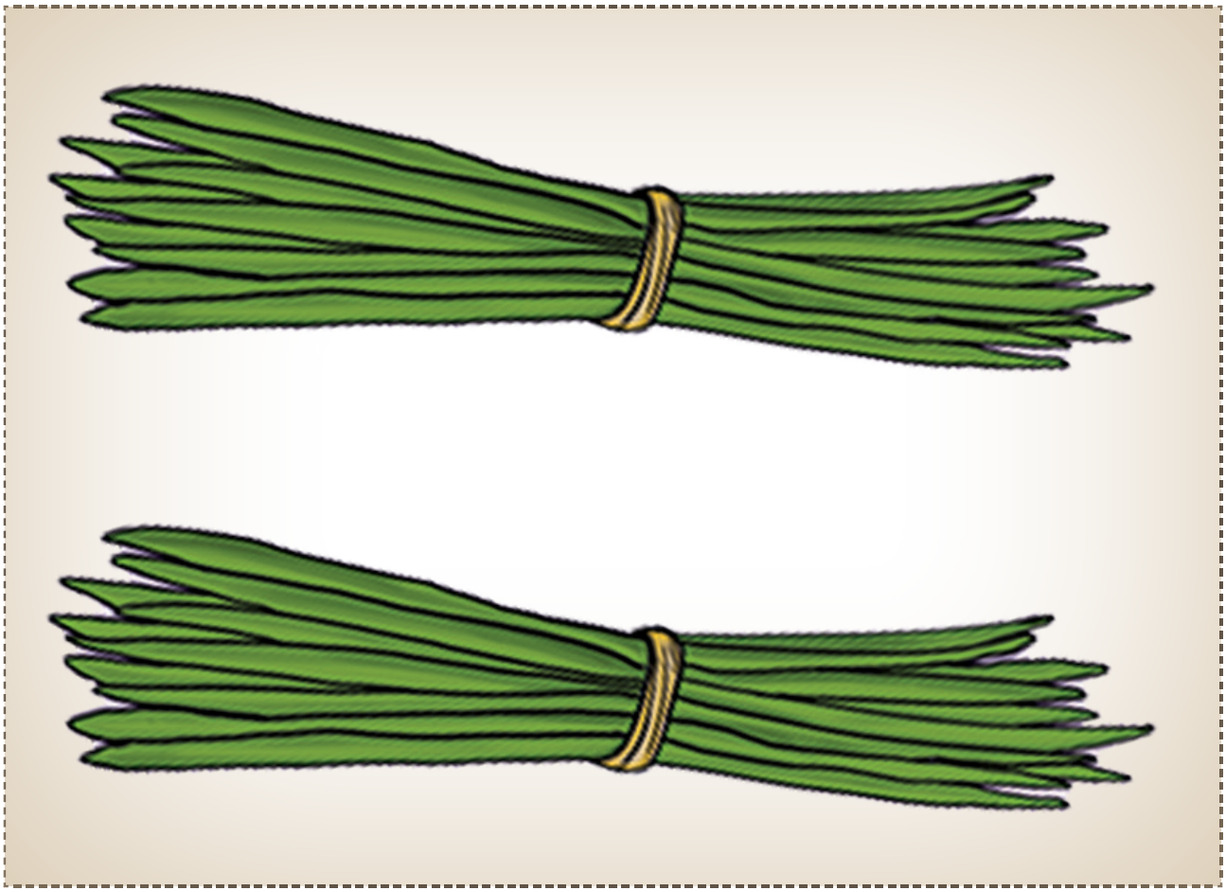
21	Twenty one	22	Twenty two
23	Twenty three	24	Twenty four
25	Twenty five	26	Twenty six
27	Twenty seven	28	Twenty eight
29	Twenty nine	30	Thirty
31	Thirty one	32	Thirty two
33	Thirty three	34	Thirty four
35	Thirty five	36	Thirty six
37	Thirty seven	38	Thirty eight
39	Thirty nine	40	Forty

41	Forty one	42	Forty two
43	Forty three	44	Forty four
45	Forty five	46	Forty six
47	Forty seven	48	Forty eight
49	Forty nine	50	Fifty
51	Fifty one	52	Fifty two
53	Fifty three	54	Fifty four
55	Fifty five	56	Fifty six
57	Fifty seven	58	Fifty eight
59	Fifty nine	60	Sixty

61 Sixty one	62 Sixty two
63 Sixty three	64 Sixty four
65 Sixty five	66 Sixty six
67 Sixty seven	68 Sixty eight
69 Sixty nine	70 Seventy
71 Seventy one	72 Seventy two
73 Seventy three	74 Seventy four
75 Seventy five	76 Seventy six
77 Seventy seven	78 Seventy eight
79 Seventy nine	80 Eighty

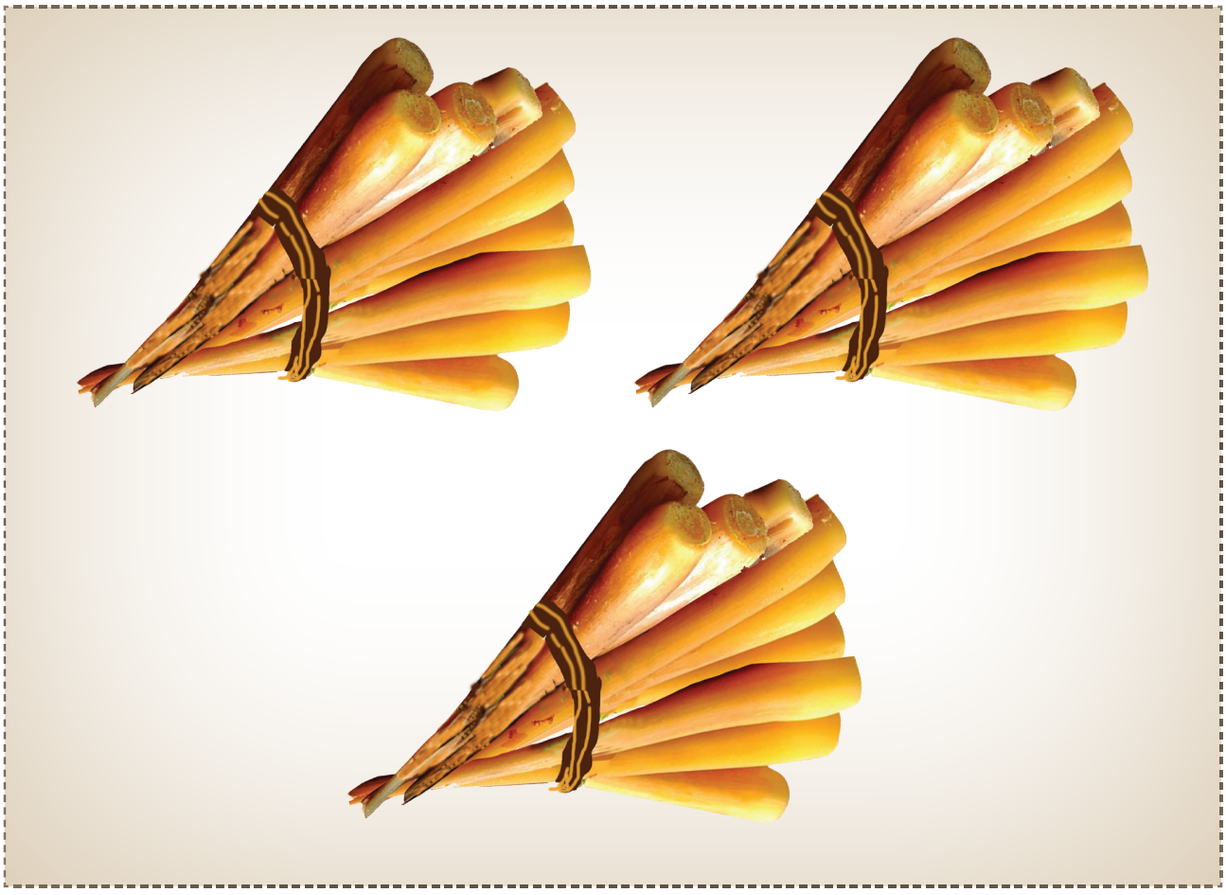
81 Eighty one	82 Eighty two
83 Eighty three	84 Eighty four
85 Eighty five	86 Eighty six
87 Eighty seven	88 Eighty eight
89 Eighty nine	90 Ninety
91 Ninety one	92 Ninety two
93 Ninety three	94 Ninety four
95 Ninety five	96 Ninety six
97 Ninety seven	98 Ninety eight
99 Ninety nine	100 One hundred





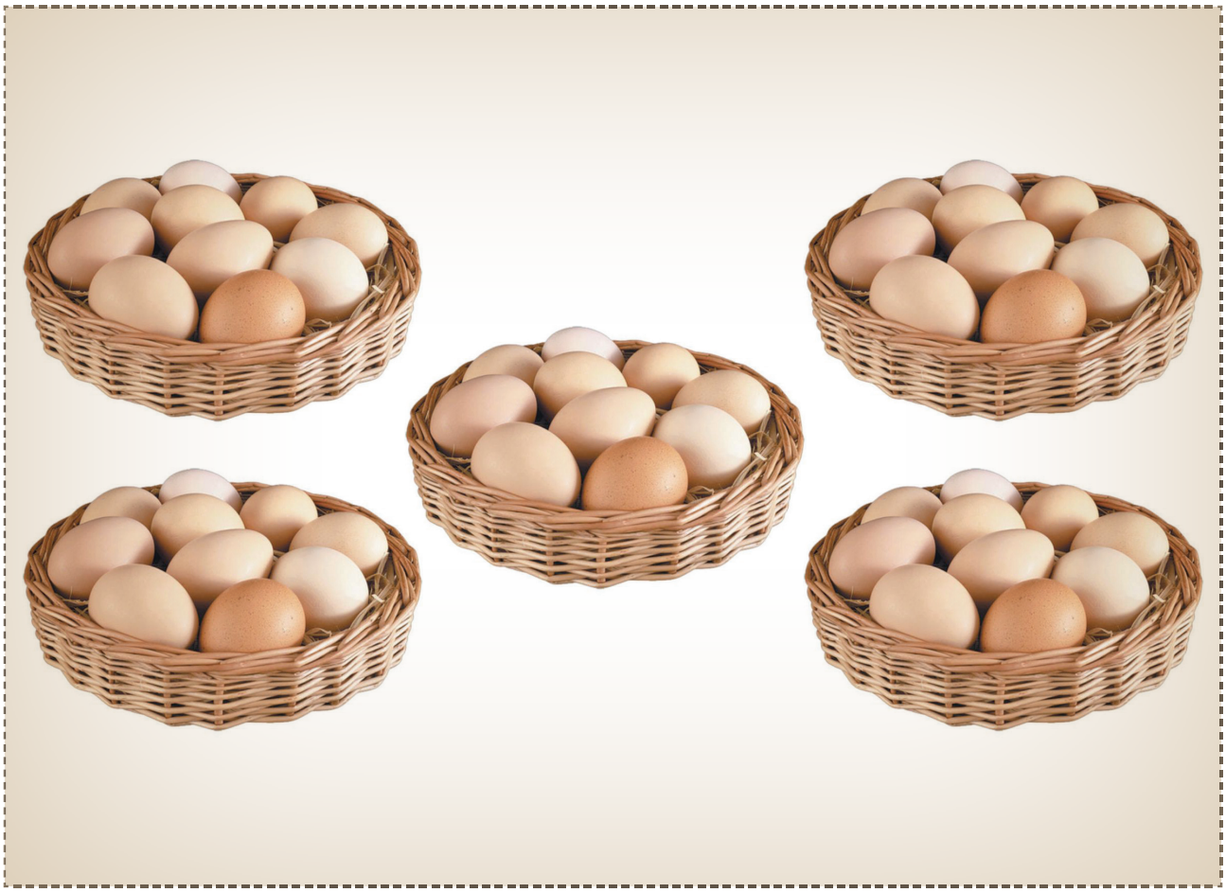
Ten

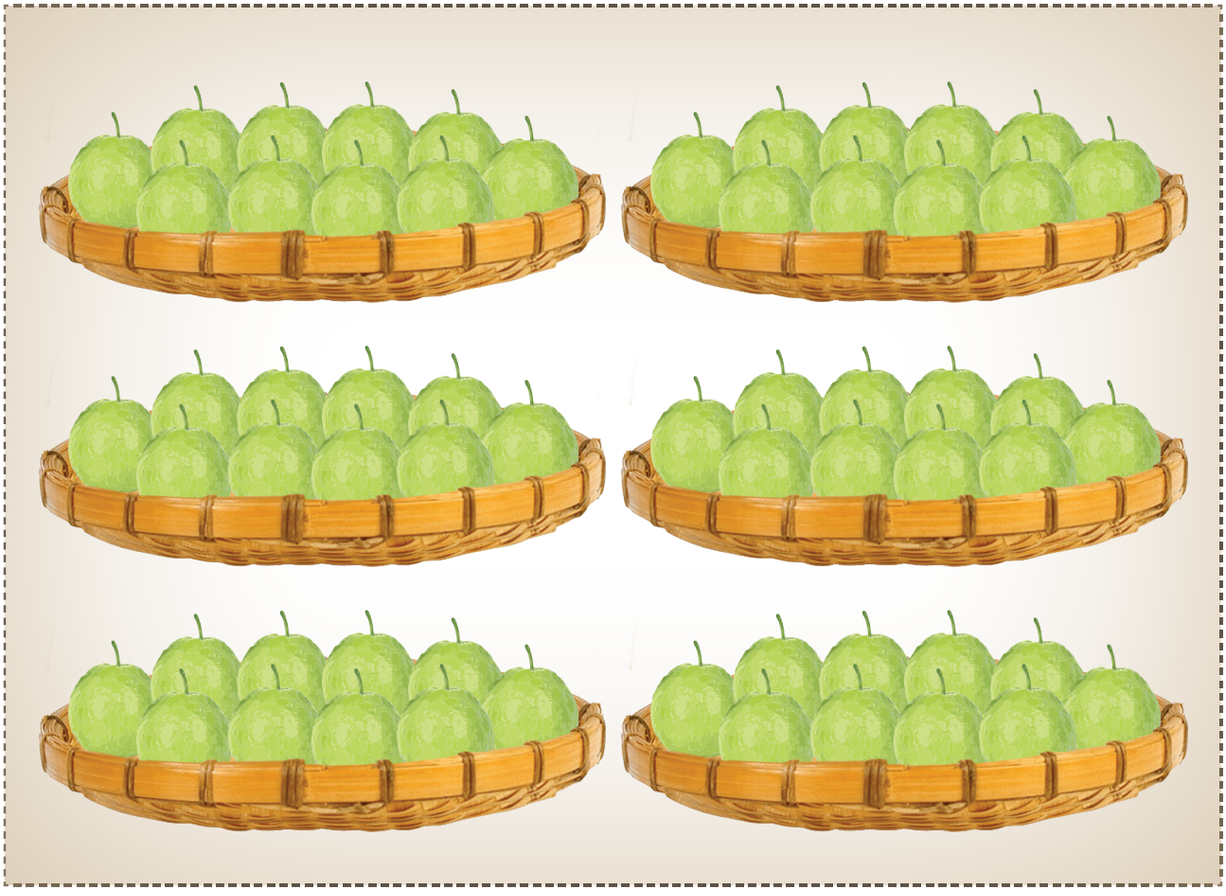
Twenty



Thirty

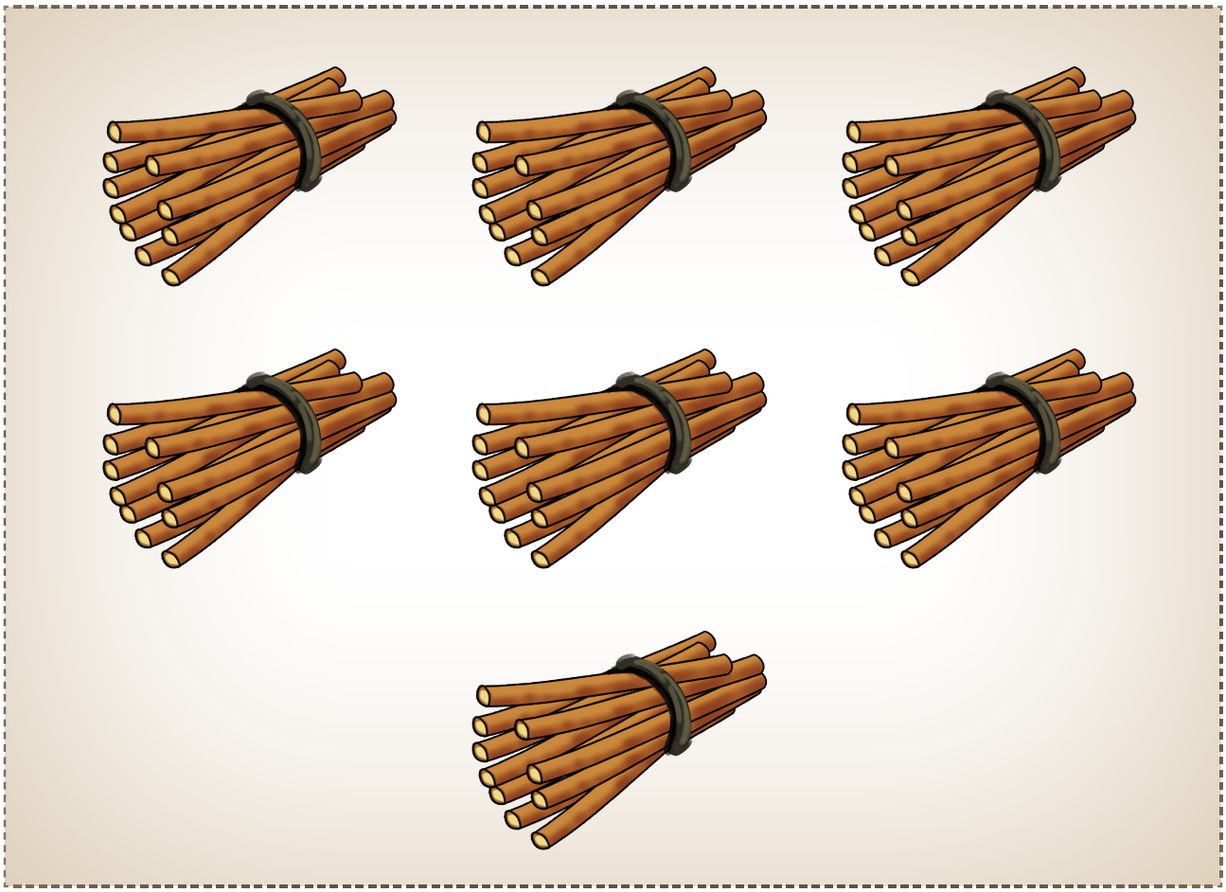
Forty

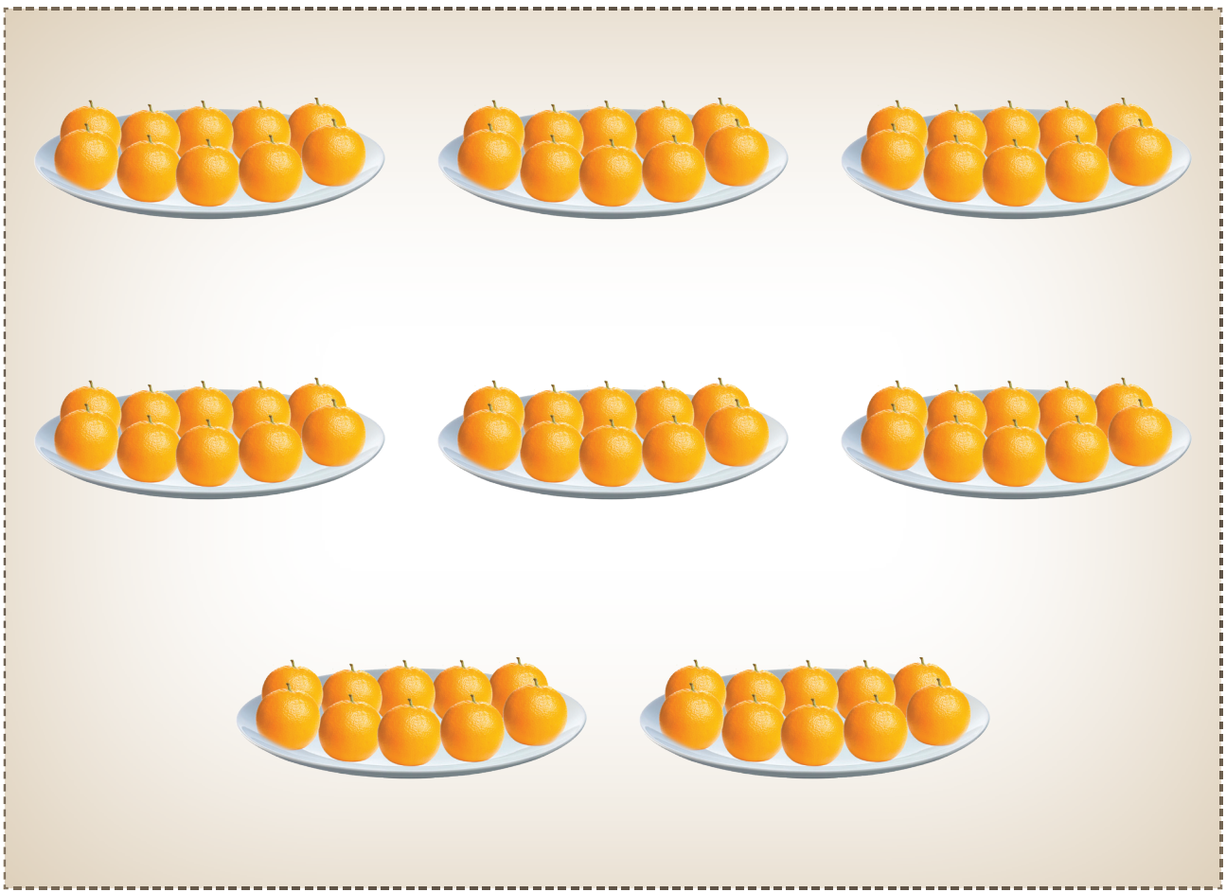




Fifty

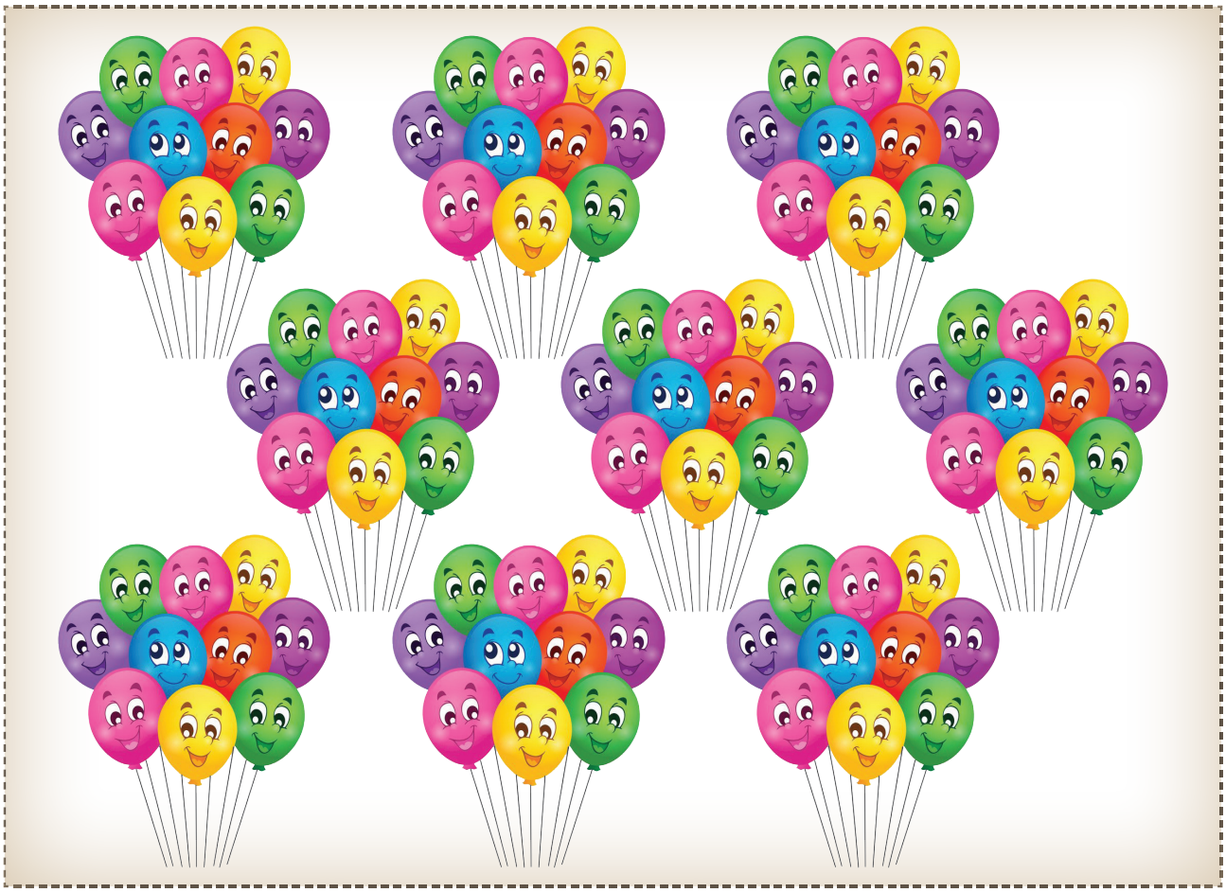
Sixty

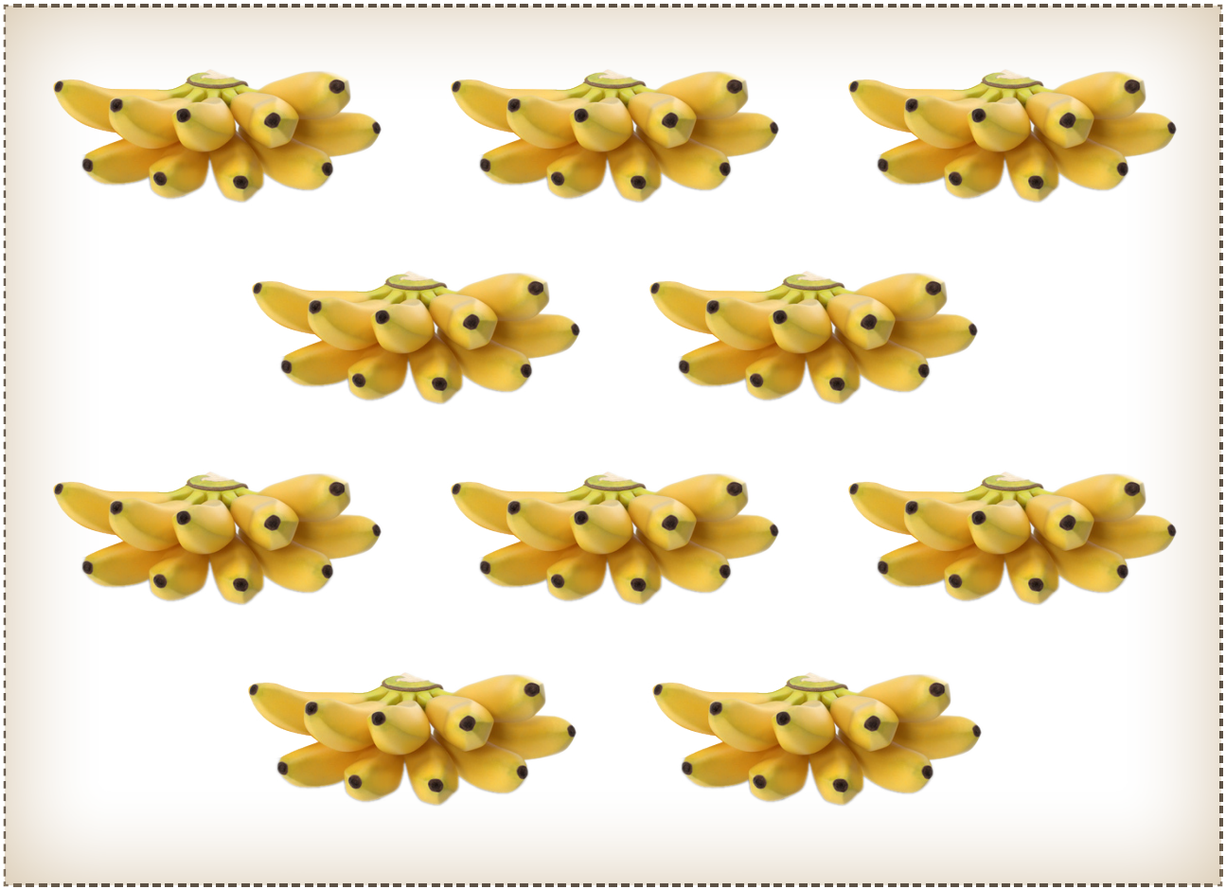




Seventy

Eighty





Ninety

One hundred

2 x 1 = 2

2 x 2 = 4

2 x 3 = 6

2 x 4 = 8

2 x 5 = 10

2 x 6 = 12

2 x 7 = 14

2 x 8 = 16

2 x 9 = 18

2 x 10 = 20

3 x 1 = 3

3 x 2 = 6

3 x 3 = 9

3 x 4 = 12

3 x 5 = 15

3 x 6 = 18

3 x 7 = 21

3 x 8 = 24

3 x 9 = 27

3 x 10 = 30

4 x 1 = 4

4 x 2 = 8

4 x 3 = 12

4 x 4 = 16

4 x 5 = 20

4 x 6 = 24

4 x 7 = 28

4 x 8 = 32

4 x 9 = 36

4 x 10 = 40

5 × 1 = 5	6 × 1 = 6	7 × 1 = 7
5 × 2 = 10	6 × 2 = 12	7 × 2 = 14
5 × 3 = 15	6 × 3 = 18	7 × 3 = 21
5 × 4 = 20	6 × 4 = 24	7 × 4 = 28
5 × 5 = 25	6 × 5 = 30	7 × 5 = 35
5 × 6 = 30	6 × 6 = 36	7 × 6 = 42
5 × 7 = 35	6 × 7 = 42	7 × 7 = 49
5 × 8 = 40	6 × 8 = 48	7 × 8 = 56
5 × 9 = 45	6 × 9 = 54	7 × 9 = 63
5 × 10 = 50	6 × 10 = 60	7 × 10 = 70

8 x 1 = 8

8 x 2 = 16

8 x 3 = 24

8 x 4 = 32

8 x 5 = 40

8 x 6 = 48

8 x 7 = 56

8 x 8 = 64

8 x 9 = 72

8 x 10 = 80

9 x 1 = 9

9 x 2 = 18

9 x 3 = 27

9 x 4 = 36

9 x 5 = 45

9 x 6 = 54

9 x 7 = 63

9 x 8 = 72

9 x 9 = 81

9 x 10 = 90

10 x 1 = 10

10 x 2 = 20

10 x 3 = 30

10 x 4 = 40

10 x 5 = 50

10 x 6 = 60

10 x 7 = 70

10 x 8 = 80

10 x 9 = 90

10 x 10 = 100