

# Community Learning Camp Math Manual

Children have not been able to go to school for over a year now. While some children have been able to continue learning, many others have not been able to study systematically. Come, let us help such children in our community! Do a 'math learning camp' for one month. This will enable children to build or re-build their foundational skills in math.

We hope that by the end of this month, every child will know numbers till 100 and will be able to do basic math operations till 100 confidently.

Make friends with children. Teach and learn through play!

All the very best! We hope that we will succeed all together in reaching our goal.

Thank you !

### What is the objective?

By the end of this camp, all children will be able to:

- Recognize numbers till 100 with place value.
- Solve 2-digit addition and subtraction problems, including those with carryover and borrowing

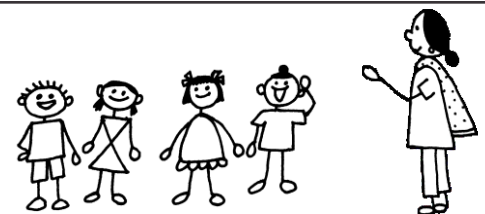
### For whom?

- Children in grades 3 to 6 who are still struggling with 2 digit subtraction.
- Each learning camp will have 8-10 children.
- Remember to maintain social-distance. Sanitize hands and feet and wear a mask while sitting in the group.

### When & Where?

- 4 weeks
- 1-1.5 hours daily
- At the same place and same time every day

Daily Activities	Duration
Play - Warm up	10 mins
Number recognition	20 mins
Addition – Subtraction operations	20 mins
Discussion on questions	20 mins
Play – Cool down	10 mins

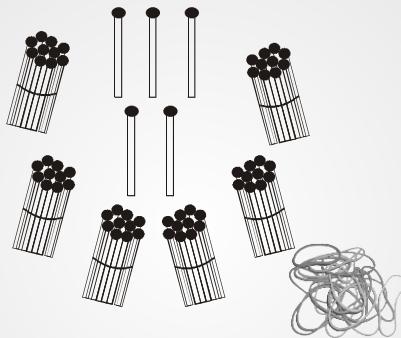


### What materials are needed?

Number chart										
1	11	21	31	41	51	61	71	81	91	
2	12	22	32	42	52	62	72	82	92	
3	13	23	33	43	53	63	73	83	93	
4	14	24	34	44	54	64	74	84	94	
5	15	25	35	45	55	65	75	85	95	
6	16	26	36	46	56	66	76	86	96	
7	17	27	37	47	57	67	77	87	97	
8	18	28	38	48	58	68	78	88	98	
9	19	29	39	49	59	69	79	89	99	
10	20	30	40	50	60	70	80	90	100	

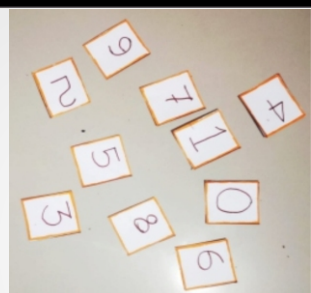
- Chart for the whole group
- Each child can make one for their own use as well

### Sticks / Straws & Rubbers



- Ask each child to collect 50-100 Sticks
- Get 5-10 rubber bands

### Number cards



- A set of number cards for the whole group. The set should have at least 5 cards each of the number.
- Children can make number cards for their own use too.

## Number Recognition

### Number chart reading

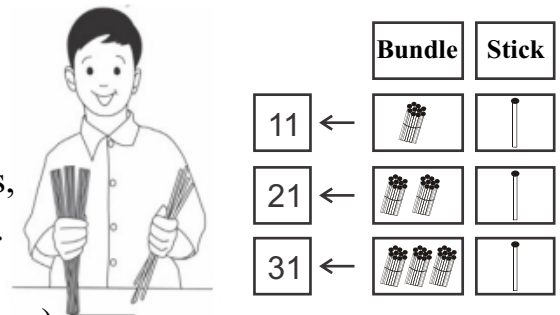
- Place a finger on any line and read numbers one by one. (Like 1 to 10 or 11 to 20 or 71 to 80 etc.)
- At first, children must watch and listen. They must not repeat after you.
- Ask the children, “Who will read like me?”.
- Invite children to come up and say to read aloud different sections of the number chart.
- After some days, the chart can be read in different ways. Horizontally, vertically, diagonally or randomly.
- The number chart can also be written on the floor or on the wall.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

### Activities with Bundles-Sticks

Ask the children to :

- Pick a handful of sticks.
- Guess the number of sticks.
- Count them loudly one by one.
- Tie them in a bundle each time after counting 10 sticks,
- Make a frame for putting down the bundles and sticks.
- Place the sticks always in the box for sticks (units) first, then place the bundles in the box of bundles (tens).
- Read the number that is formed by combining the bundles and sticks.
- Find this number in the number chart and then say to read it aloud.
- Write the number outside the frame and then say to read it aloud.

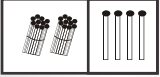
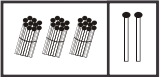



### Explaining Place value

In a given number, the value of the digit according to its place is referred to as its place value. For example, in the number 25, 2 is in the tens place so its place value is 20, and 5 is at ones place so its place value is 5.

### Number Expansion Activity

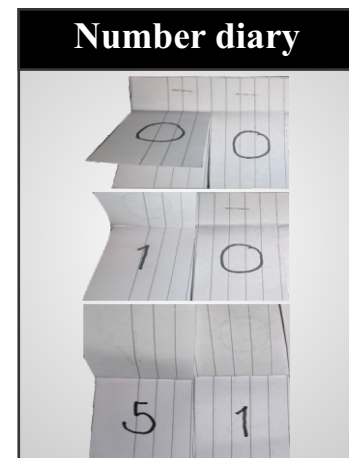
**Number expansion with bundles-sticks**

	24
	32
	50

**Number expansion with number cards**

3	0	+	4	→	34
1	0	+	7	→	17
4	0	+	8	→	48

**Number diary**



## Things to keep in mind

While solving addition-subtraction problems, keep the following points in mind:

- 10 sticks make one bundle.
- While solving a question in a frame, always start with sticks first.
- In the question, if there are more than 10 sticks in the box of sticks then make a bundle with the 10 sticks and place it in the box of bundles. Leave the remaining sticks in the box of sticks.
- For subtraction questions, if there are less sticks then take 1 bundle out of the box of bundles, open it, and place those 10 sticks with the others in the box of sticks.

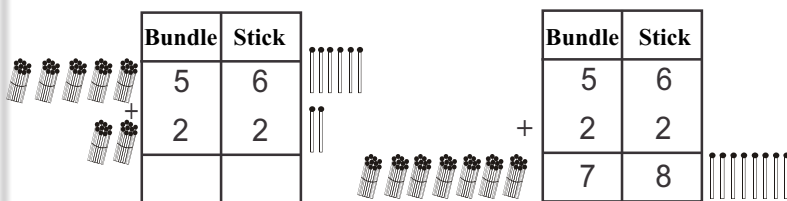
## Addition and Subtraction using Bundles-Sticks: Without carrying over or borrowing

Ask questions, some examples are given:

- Discuss - what is in the problem that we are trying to solve? What operation is required? Will things increase or decrease?
- Children should count sticks aloud and form numbers. If there are 10 sticks then say to make one bundle.
- Place the sticks in the box of sticks (place for ones). Place the bundles in the box of bundle (place for tens). Alongside, write the numbers. For either addition or subtraction questions, start with sticks first. Remember the sign of the operation.
- After solving the question, verify the answer.

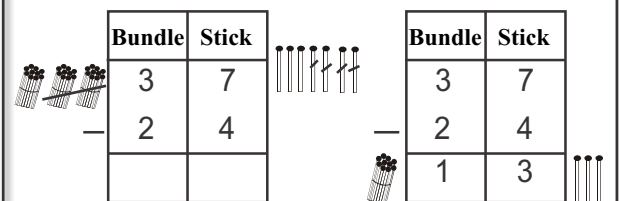
In a match of cricket, one player scored 56 runs. Another player scored 22 runs. How many runs did they score in total?

### Simple Addition



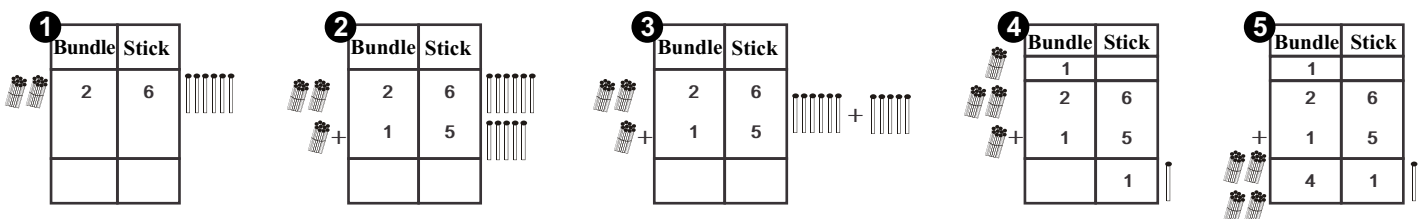
37 guests came to a wedding. After dinner, 24 guests left. How many guests still remain at the wedding?

### Simple Subtraction



## Addition using Bundles-Sticks: With carry over

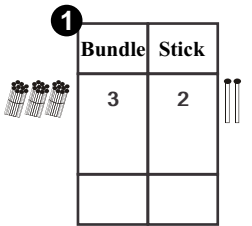
*Raju has 26 mangoes. Nisha has given him 15 more mangoes. Now, how many mangoes does Raju have?*



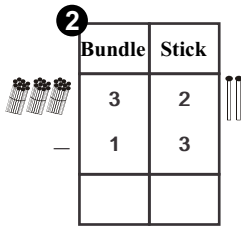
- Place a finger and read like this : In 26 adding 15 we get 41.
- Read the answer along with the question and write the answer in one sentence – Now, Raju has 41 mangoes.

## Subtraction using Bundle-Sticks: With borrowing

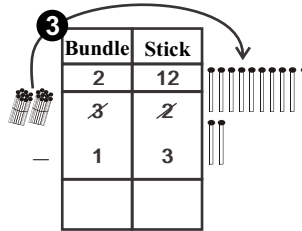
Sooraj has 32 sweets. He gave 13 sweets to his brother. Now, how many sweets are left with him?



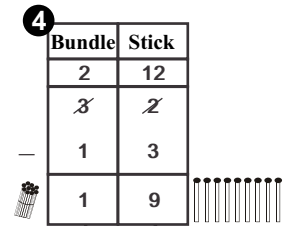
Place sticks in the space for sticks. Place bundles in the space for bundles.



First deal with the sticks. 3 sticks cannot be subtracted from 2 sticks.



Hence 1 bundle will have to be opened, and those sticks will have to be placed in the space for sticks. We have one less bundle now. We have  $10+2=12$  sticks now. So now we will subtract 3 sticks from 12 sticks.



Now we are left with 9 sticks. Next, 1 bundle has to be subtracted from 2 bundles.

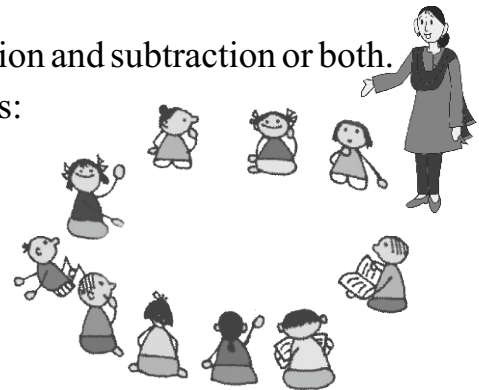
- Place a finger and read like this : In 32, subtracting 13 we are left with 19.
- Read the answer along with the question and write it in one sentence—Now, Sooraj has 19 sweets left.

### Discussion for problem solving

On a daily basis, discuss at least 2 problems with either addition and subtraction or both.

To understand any problem, it is important to discuss 4 things:

- What information is given in the question?
- What is asked in the question?
- To solve it what operation is required.
- Why addition or why subtraction?



### Session plan

Some goals have been decided for the camp on which work will be done with children till it ends. If any child is capable of doing and understanding higher level competencies, beyond the decided goals, then give them tasks appropriate to their level.

All tasks have been allocated week-wise. For each week, the overall framework and guidelines have to be transformed according to daily activity plan.

### Weekly Session plan

Community Math Learning Camp				
Week	Week 1	Week 2	Week 3	Week 4
	Warm-up			
Focus	Focus on a variety of activities with numbers till 20	Focus on a variety of activities with numbers till 50	Focus on a variety of activities with numbers till 100	Focus on a variety of activities with numbers till 100
Number Recognition Activities	Counting aloud with objects	Counting aloud with objects	Using number line	Activities on comparison and sequencing of numbers
	Making bundle-sticks	Making bundle-sticks		
	Knowing where to put bundle-sticks in the frame	Knowing where to put bundle-sticks in the frame	Use the number chart in different ways - straight, backwards, diagonal, zig-zag etc.	
	Find the number in the chart	Find the number in the chart		
	Write the number	Write the number	Write the number	Write the number
Doing operations	Using bundle-sticks, frame and method		Using bundle-sticks, frame and method (if needed)	Try solving without using bundle-sticks
Discussion on Questions	Oral discussion and focus on how children think?			
	Difficulty of questions will increase by the week: numbers, in the way questions are asked and counting			
Play before going home	Jump-Jump-Jump	Clap and Click	Count-Count-Counting	Double-Trouble
	Back to Front	Break and Make	Name your price. Price your name	Calendar My Friend
	Uncle's House	Slithery Snake	Hot and Cold	Third Man
	Throwing the Dice	Number Diary	Number Circles	Score a century!
	Fire in the Mountain	Red & Blue-Me & You	Laugh & Cry. Come Let's Try.	Who is big and who is small?



### Remember a few things while conducting a 'Community Learning Camp':

Children may have forgotten how to focus for a length of time on tasks. Be mindful of this fact and help children accordingly. It is common in math classes for there to be very little conversation or discussion around the tasks that are being done. In your learning camp, make sure to talk about math. Every child must get a chance to speak. Listen to them closely. Children learn by doing. Hence, it is important that every child takes part in activities, games and in the discussion.