



G3.15 | ADDITION, SUBTRACTION USING 10 X 10 GRID

Number Operations Concepts - NCERT Chapter 3: Give and Take (sum upto 999)

Students will be able to solve quick addition and subtraction problems involving 2 digit numbers using a 10 x 10 grid

40- 50 min

PRE REQUISITES:

G2.30 Know how to add 2-digit numbers

TLM

None

MISCONCEPTIONS

None



KEY VOCABULARY

None



PLAY

$$41 + 20 =$$

+ 20	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

Game of addition and subtraction

○ Draw a number grid (1-50) on the blackboard

○ Circle any number between 1-20 and place a counter there

○ Call a student and ask them to add 10 by moving the counter forward on the number grid

○ Ask the student to circle the number they reach to

○ Call another student to add 10 more to the number where the counter is.

○ Ask the student if they can guess where the counter will reach if they were asked to add 10 more now

○ Ask the student if they can guess where the counter will reach if they were asked to add 10 more now

○ Repeat the activity by asking the students to add in multiples of 10 (add 20, add 30, etc.)



PROCESS

23	11	12	13	14	15	16	17	18	19	20
+45	21	22	23	24	25	26	27	28	29	30
	31	32	33	34	35	36	37	38	39	40
+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
+5	71	72	73	74	75	76	77	78	79	80

Using a no. grid to add & subtract no.s quickly

Using a number grid to add and subtract numbers quickly

○ Write no.s 1-100 in a 10X10 no. grid. Tell that moving from a no. to the no. immediately below it shows addition

○ It shows addition of 10 to the no. Tell that moving from any no. to the no. rows below shows addition of 20 to the no.

○ Tell that the trick can be used to quickly add the no.s. Write $63 + 20$. Circle 63 on the no. grid & move 2 rows down

○ Circle 83 & tell the students that $63 + 20$ is 83. Tell that moving up a row shows subtraction of 10

○ Write $63 - 20$. Circle 63 on the no. grid & move 2 rows up. Circle 43 & tell the students that $63 - 20$ is 43

○ Write $23 + 45$. Explain that the addition can be done in 2 parts

○ One can first add 40 to 23 by moving down 2 rows & then add 5 by moving forward 5 places



PRACTICE

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

Write the question on the blackboard & ask the students to solve

○ Help the students solve question 3 from the worksheet. Ask the students to use the no. grid to solve $69 - 22$

$$14 + 27 =$$
$$27 - 14 =$$

○ Help the students solve question 5 from the worksheet. Ask the students to estimate the sum or difference without actually calculating it

○ Explain that no. grids can also help estimate the approximate sum or difference. Demonstrate using a no. grid that $14 + 20$ is 34. Therefore, one can say that $14 + 27$ will be more than 34

○ Similarly, explain that moving up 1 row from 27 will take us to 17. Therefore, one can say that $27 - 14$ is less than 17



- ① SOLVED EXAMPLE : Subtract 9 from 25 using a number grid

Subtracting 9

$$25 - 9 = 16$$

Subtract 10 ↑
Add 1 →

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

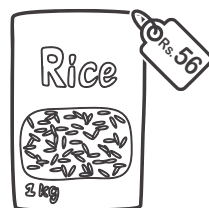
- ② Add 34 to 56 using this number grid

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

- ③ Subtract 22 from 69

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

- ④ Check if Meetu has added the money correctly



$$\text{Rs. } 45 + \text{Rs. } 56 = \text{Rs. } 90$$

- ⑤ Fill in the blanks using the word "more" or "less"

$$14 + 27 = \text{____ (more or less) than } 37$$

$$27 - 14 = \text{____ (more or less) than } 17$$

$$48 + 31 = \text{____ (more or less) than } 80$$

- ⑥ Use this no. grid to add 46 to 465

a. 46 to 465

b. 456 + 46

451	452	453	454	455	456	457	458	459	460
461	462	463	464	465	466	467	468	469	470
471	472	473	474	475	476	477	478	479	480
481	482	483	484	485	486	487	488	489	490
491	492	493	494	495	496	497	498	499	500