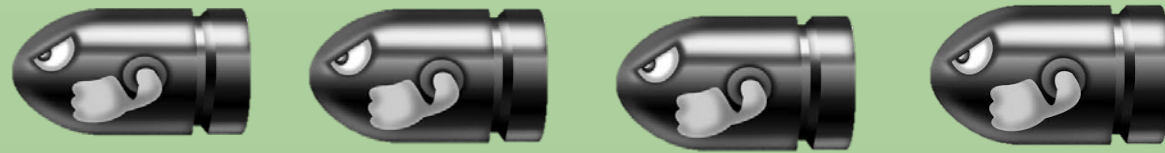


CLASS — 2



CHAPTER — 3

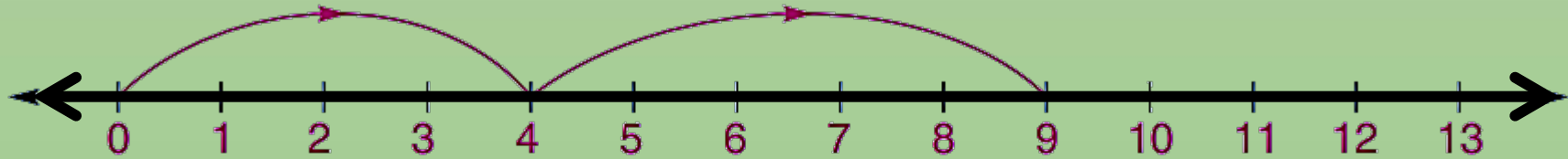
ADDITION



03
STEP

ADDITION

Add 4 and 5 by using number line. Start from 0, take 4 steps right, then take 5 steps more. We get 9.



$$\boxed{4} + \boxed{5} = \boxed{9} \rightarrow \text{sum}$$

→ Addition

PROPERTIES OF ADDITION



$$3 + 4 = 7$$



$$4 + 3 = 7$$

Hence, $3 + 4 = 4 + 3$.

A change in the order of the addends does not change the sum.





$$8 + 4 + 6 = 18$$



$$\begin{array}{rclclcl} (8 + 4) & + & 6 & = & 18 \\ 12 & + & 6 & = & 18 \end{array}$$



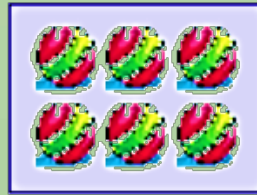


$$\begin{array}{ccccccc} 8 & + & (4 + 6) & = & 18 \\ 8 & + & 10 & = & 18 \end{array}$$

Hence, $8 + 4 + 6 = (8 + 4) + 6 = 8 + (4 + 6)$

A change in the grouping of addends does not change the sum.





$$6 + 0 = 6$$

Hence, **$6 + 0 = 6$** .



$$5 + 0 = 5$$

Hence, **$5 + 0 = 5$** .

When, we add 0 to a number,
the sum is the number itself.



4



3



7

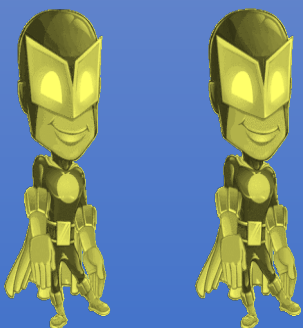
3



6



9



2



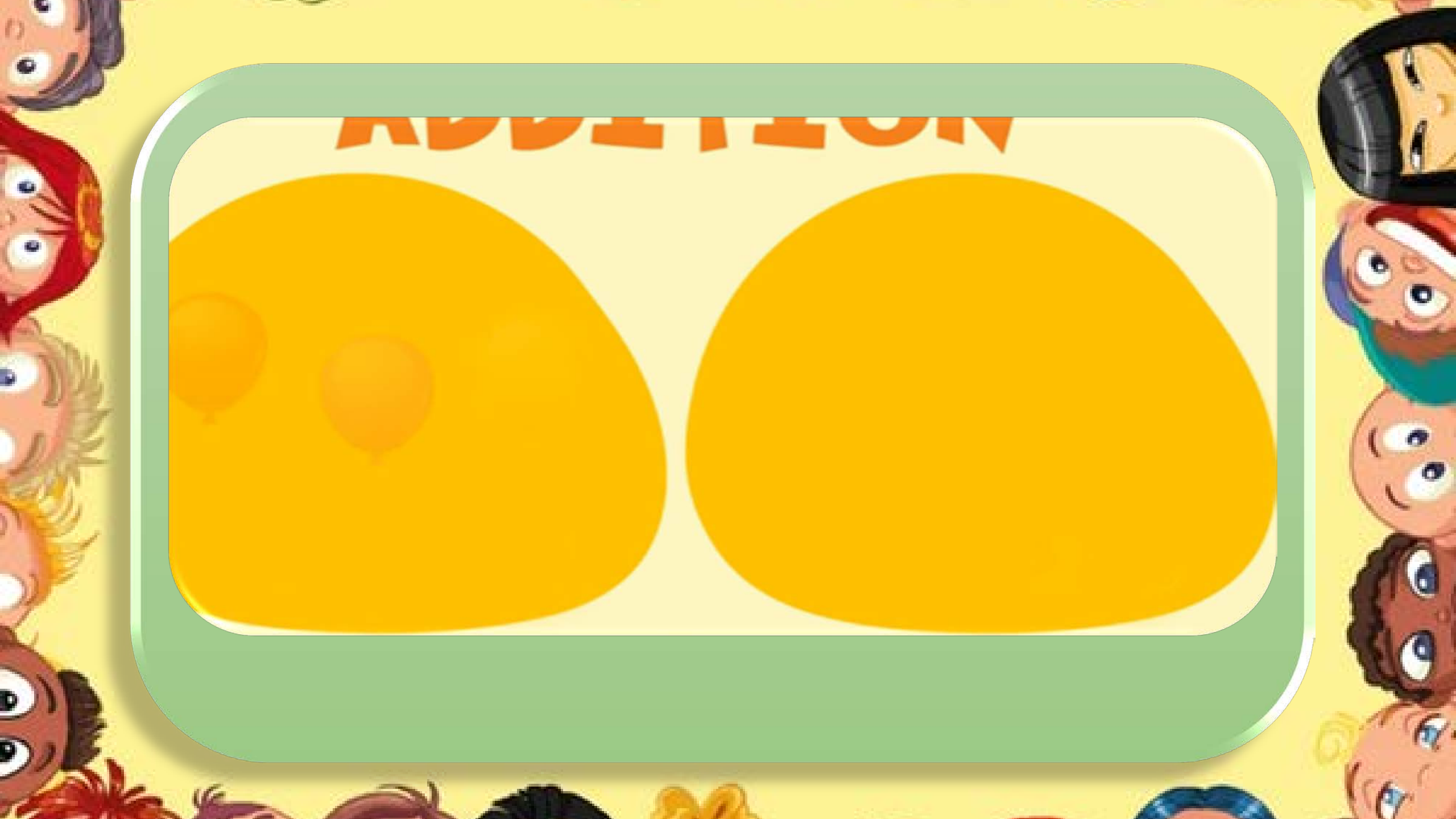
2

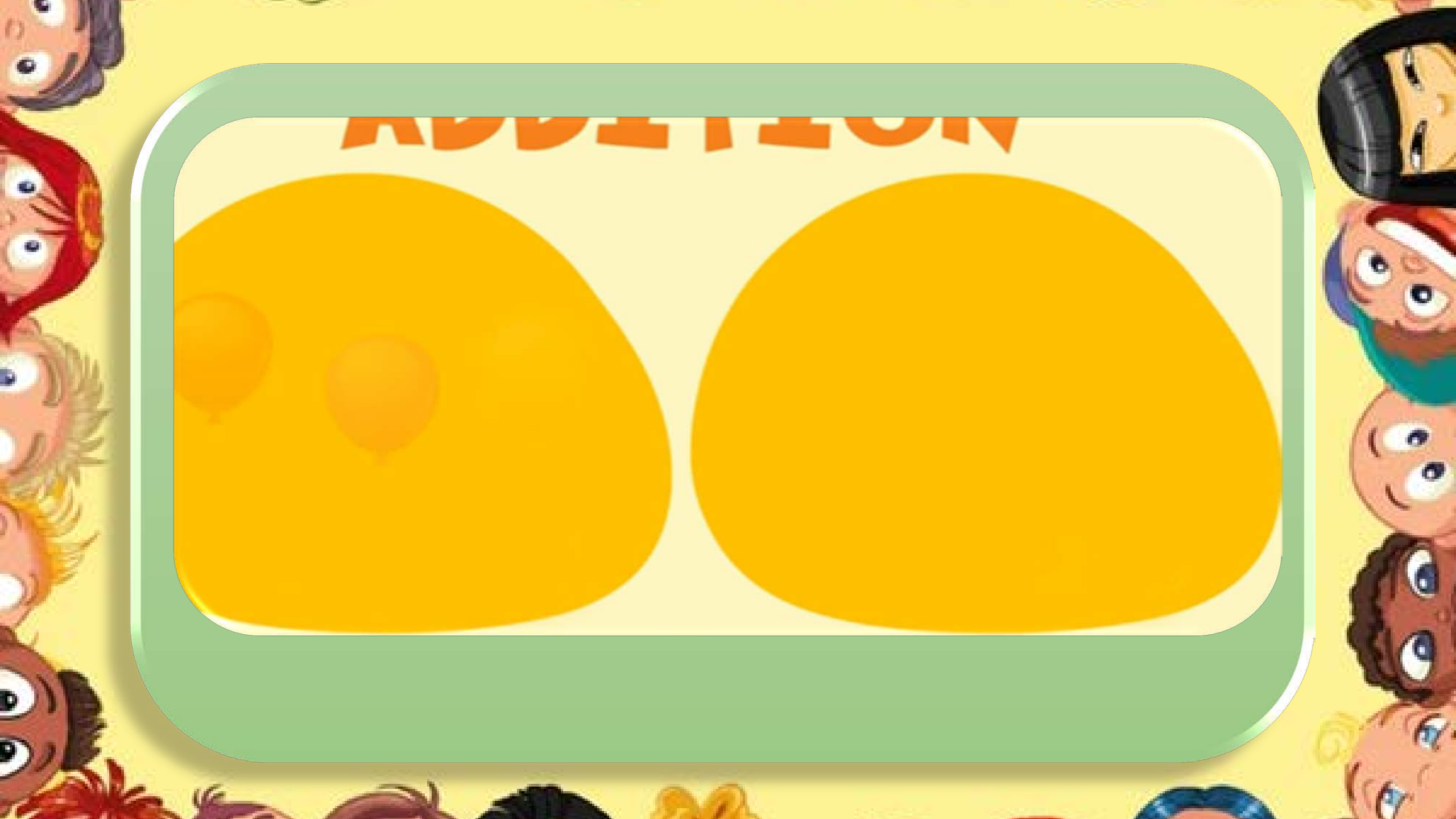


4



2
cows





Addition



Addition



Addition





Adding Two Numbers (Without Carrying)

EXAMPLE 1 : Add 62 and 35.

SOLUTION :

EXPANDED FORM :

6 2	→	6 tens + 2 ones
+ 3 5	→	3 tens + 5 ones
9 7		9 tens + 7 ones = 90 + 7 = 97



Therefore, $62 + 35 = 97$.

SHORT FORM

T	O
6	2
+ 3	5
9	7

Adding ones, i.e. $2 + 5 = 7$

Adding tens, i.e. $6 + 3 = 9$

Hence, the sum of 62 and 35 is 97.



EXAMPLE 2 : Add 435 and 243.

SOLUTION :

EXPANDED FORM

4 3 5	→	4 hundreds + 3 tens + 5 ones
+ 2 4 3	→	2 hundreds + 4 tens + 3 ones
6 7 8	→	6 hundreds + 7 tens + 8 ones = 600 + 70 + 8 = 678

Therefore, $435 + 243 = 678$.



SHORT FORM



H	T	O
4	3	5
2	4	3
6	7	8

Adding ones, i.e. $5 + 3 = 8$

Adding tens, i.e. $3 + 4 = 7$

Adding hundreds, i.e. $4 + 2 = 6$



Hence, the sum of **435** and **243** is **678**.



Adding Three Numbers (Without Carrying)

EXPANDED FORM

EXAMPLE : Add 223, 322 and 214.

SOLUTION :

2 2 3	→	2 hundreds + 2 tens + 3 ones
+ 3 2 2	→	3 hundreds + 2 tens + 2 ones
+ 2 1 4	→	2 hundreds + 1 ten + 4 ones
7 5 9	←	7 hundreds + 5 tens + 9 ones $= 700 + 50 + 9 = 759$



Therefore, $223 + 322 + 214 = 759$.

SHORT FORM



H	T	O
2	2	3
3	2	2
2	1	4
7	5	9



Adding ones, i.e. $3 + 2 + 4 = 9$

Adding tens, i.e. $2 + 2 + 1 = 5$

Adding hundreds, i.e. $2 + 3 + 2 = 7$

Hence, the sum of 223, 322 and 214 is **759**.

Adding 2-digit Numbers (With Carrying)



EXAMPLE : Add 36 and 37.

SOLUTION :

T	O
3	6
3	7

EXPANDED FORM

→ 3 tens + 6 ones

→ 3 tens + 7 ones

6 tens + 13 ones



$$= 6 \text{ tens} + \boxed{10 \text{ ones} + 3 \text{ ones}}$$

$$= 10 \text{ ones} + 3 \text{ ones}$$

$$= \boxed{6 \text{ tens} + 1 \text{ ten} +} 3 \text{ ones} =$$

$$= 7 \text{ tens} + 3 \text{ ones}$$

$$= \boxed{70} + \boxed{3} = \boxed{73}$$

SHORT FORM

3	6
+ 3	7
7	3

Carry →

T	O
1	
3	6
3	7
7	1 3

Hence, $36 + 37 = 73$.

Match the question to its answer :



- 1. A pencil box contains 24 pencils.
Another box contains 34 pencils.
Find the total number of pencils
in the two boxes.**

(a)79

- 2. . Pooja has 63 stamps. She collects
16 stamps more. How many stamps
does she have now ?**



(b)58



ADDING 3-DIGIT NUMBERS (WITH CARRYING)

EXAMPLE : Add 476 and 349.

EXPANDED FORM

$$\begin{array}{r} 476 \\ + 349 \\ \hline \end{array}$$

4 hundreds + 7 tens + 6 ones

3 hundreds + 4 tens + 9 ones

7 hundreds + 11 tens + 15 ones





= 7 hundreds + 11 tens + 10 ones + 5 ones

= 7 hundreds + 11 tens + 1 ten + 5 ones

= 7 hundreds + 12 tens + 5 ones

= 7 hundreds + 10 tens + 2 tens + 5 ones

= 7 hundreds + 1 hundred + 2 tens + 5 ones

= 8 hundreds + 2 tens + 5 ones

= 800 + 20 + 5 = 825



SHORT FORM



4	7	6
+	3	4
8	2	5

H	T	O
1 4	1 7	6
+	3	4
8	1 2	1 5

Hence, $476 + 349 = 825$.





$$\begin{array}{r} \text{H} \quad \text{T} \quad \text{O} \\ \begin{array}{|c|} \hline 1 \\ \hline \end{array} \quad \begin{array}{|c|} \hline 1 \\ \hline \end{array} \\ 4 \quad 5 \quad 6 \\ + \quad 3 \quad 8 \quad 9 \\ \begin{array}{|c|c|c|c|c|} \hline 8 & 1 & 4 & 1 & 5 \\ \hline \end{array} \\ \begin{array}{|c|c|c|} \hline 8 & 4 & 5 \\ \hline \end{array} \end{array}$$



Thank
you

