

SESSION : 8

CLASS : 3

SUBJECT : MATHEMATICS

CHAPTER NUMBER: 4

CHAPTER NAME : SUBTRACTION

SUBTOPIC : RELATIONSHIP BETWEEN ADDITION AND SUBTRACTION

CHANGING YOUR TOMORROW

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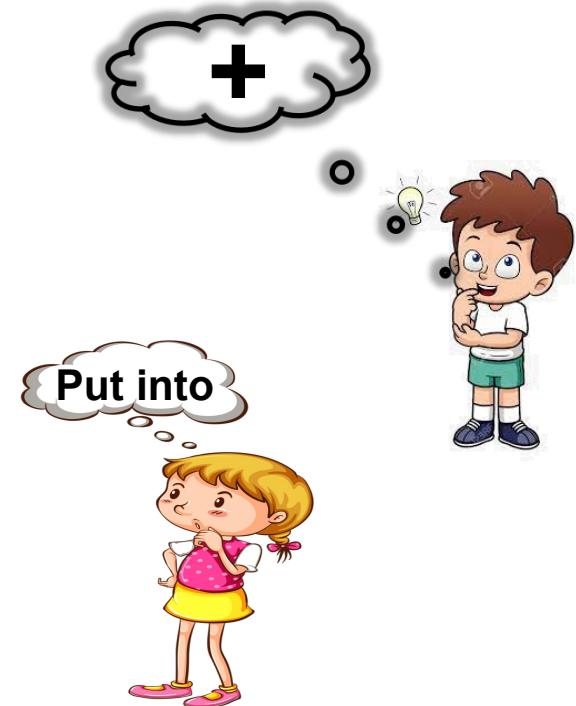
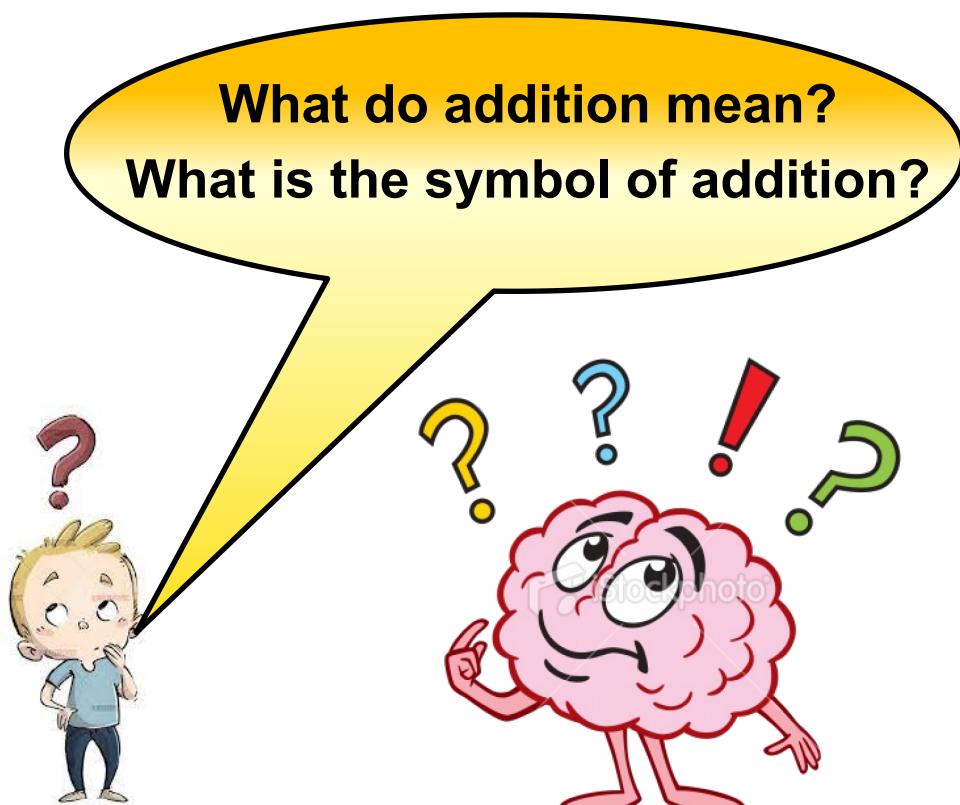
LEARNING OBJECTIVE :

Children will:

- * Acquire the knowledge that Addition and subtraction is related
- * Know that every addition statement has 2 subtraction facts
- * Know subtraction is an inverse process of addition
- * Be able to find out the missing digit implementing the facts.

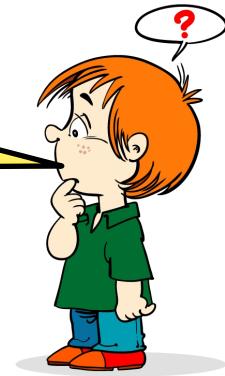
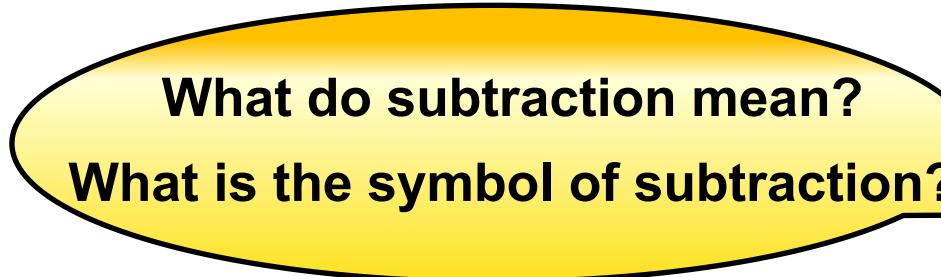
SUBTRACTION

RELATIONSHIP BETWEEN ADDITION AND SUBTRACTION



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Let us learn through an example

| | | | | |
|---|---|---|-----|---------|
| | 9 | 8 | 8 | 1st row |
| + | 2 | 0 | 2 | 2nd row |
| - | 8 | | 1 0 | 3rd row |

A red oval highlights the ones column (the rightmost column) of the subtraction problem.

STEP 1: See the ones column

$\underline{\hspace{2cm}} + 2 = 10$

If the 1st row is blank -

We subtract the 2nd row number from the 3rd row number.

So, $10 - 2 = 8$ ($8 + 2 = 10$).

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| | | | | | |
|---|-------------|-------------|-------------|---------|--|
| $\boxed{}$ | $\boxed{9}$ | $\boxed{8}$ | $\boxed{8}$ | 1st row | STEP 2: See the tens column |
| $+$ | $\boxed{2}$ | $\boxed{0}$ | $\boxed{2}$ | 2nd row | If the 2nd row is blank - |
| <hr/> | | | | 3rd row | $8 + 1 + \underline{\hspace{1cm}} = 11$ |
| $\boxed{8}$ $\boxed{}$ $\boxed{1}$ $\boxed{0}$ | | | | | $(8 + 1) + \underline{\hspace{1cm}} = 11$ OR $9 + \underline{\hspace{1cm}} = 11$ |
| $\boxed{}$ $\boxed{}$ $\boxed{1}$ $\boxed{0}$ | | | | | So, $11 - 9 = 2$. |

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$$\begin{array}{r} & 1 & 9 & 8 & 8 \\ + & 2 & 0 & 2 & 2 \\ \hline & 8 & 0 & 1 & 0 \end{array}$$

1st row
2nd row
3rd row

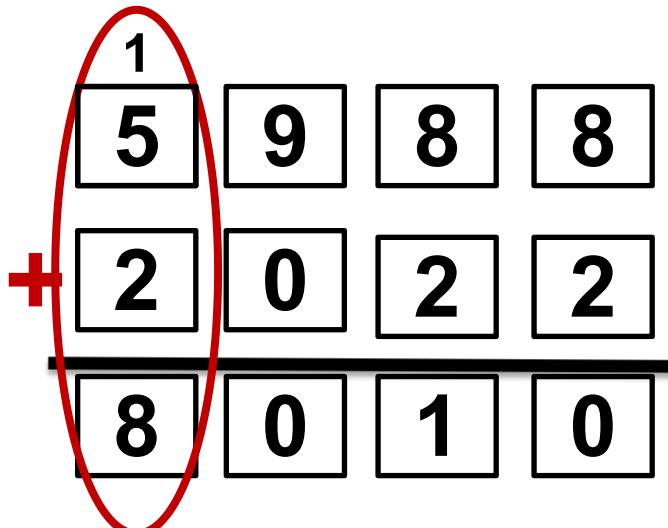
STEP 3: See the hundreds column

If the 3rd row is blank -

So, $9 + 1 + 0 = 10$

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1 5 9 8 8
+ 2 0 2 2

8 0 1 0

1st row
2nd row
3rd row

STEP 4: See the thousands column

If the 1st row is blank -

$1 + \underline{\quad} + 2 = 8$

So, $1 + 2 = 3$, $8 - 3 = 5$

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Let us see another example

| | | | |
|---|---|---|---|
| 9 | | 8 | 8 |
| 5 | 6 | | 2 |
| | 1 | 1 | 6 |

STEP 1: See the ones column

- 2 = 6

If the 1st row is blank -

A red circle highlights the ones column (8, 2, 6) and a red bracket groups the 2nd and 3rd rows.

1st row: 9, , 8, 8

2nd row: 5, 6, , 2

3rd row: , 1, 1, 6

We add the 2nd row number to the 3rd row number.

So, $6 + 2 = 8$.

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| | | | | | |
|---|---|---|---|---------|--|
| 9 | | 8 | 8 | 1st row | STEP 2: See the tens column |
| - | 5 | 6 | 7 | 2 | 2nd row If the 2nd row is blank - |
| | | 1 | 1 | 6 | 3rd row $8 - \underline{\quad} = 1$ |

We subtract the 3rd row number from the 1st row number.

So, $8 - 1 = 7$.

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| | | | |
|---|---|---|---|
| 9 | 7 | 8 | 8 |
|---|---|---|---|

1st row

STEP 3: See the tens column

| | | | |
|---|---|---|---|
| 5 | 6 | 7 | 2 |
|---|---|---|---|

2nd row

If the 1st row is blank -

| | | | |
|--|---|---|---|
| | 1 | 1 | 6 |
|--|---|---|---|

3rd row

$- 6 = 1$

We add the 2nd row number to the 3rd row number.

So, $1 + 6 = 7$.

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| | | | |
|---|---|---|---|
| 9 | 7 | 8 | 8 |
| 5 | 6 | 7 | 2 |
| 4 | 1 | 1 | 6 |

1st row

2nd row

3rd row

STEP 4: See the tens column

If the 3rd row is blank -

$$9 - 5 = 4$$

We subtract the 2nd row number from the 1st row number.

So, $9 - 5 = 4$.

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1. Fill the appropriate digits in the boxes.

$$\begin{array}{r} \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\ \boxed{5} \quad \boxed{8} \quad \boxed{6} \quad \boxed{9} \\ - \quad \boxed{2} \quad \boxed{4} \quad \boxed{3} \quad \boxed{2} \\ \hline \boxed{3} \quad \boxed{4} \quad \boxed{3} \quad \boxed{7} \end{array}$$

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Th H T O

| | | | |
|---|---|---|---|
| 1 | 5 | 2 | 0 |
|---|---|---|---|

+

| | | | |
|---|---|---|---|
| 3 | 4 | 2 | 3 |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 4 | 9 | 4 | 3 |
|---|---|---|---|

Th H T O

| | | | |
|---|---|---|---|
| 6 | 8 | 6 | 7 |
|---|---|---|---|

-

| | | | |
|---|---|---|---|
| 3 | 6 | 2 | 7 |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 3 | 2 | 4 | 0 |
|---|---|---|---|

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2. What should be added to 4 5 9 to get 9 1 1.

$$\begin{array}{r} 8 & 10 & 11 \\ \hline \cancel{9} & \cancel{1} & \cancel{1} \\ - & 4 & 5 & 9 \\ \hline 4 & 5 & 2 \end{array}$$

$$\begin{array}{r} 1 & 1 \\ \hline 4 & 5 & 9 \\ + & 4 & 5 & 2 \\ \hline 9 & 1 & 1 \end{array}$$

∴ 4 5 2 should be added to 4 5 9 to get 9 1 1.

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4. The sum of two numbers is 1989. If one of them is 873, find the other number.

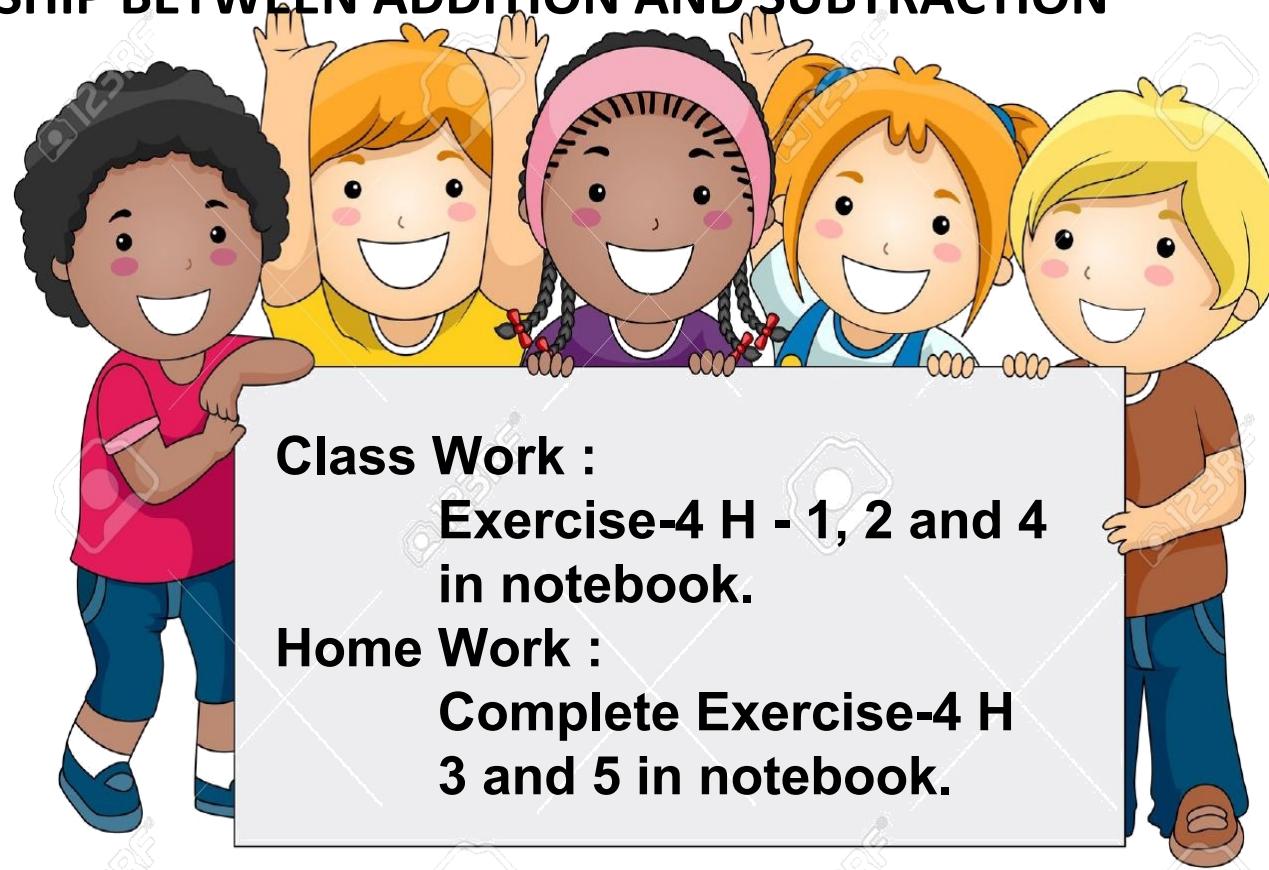
$$\begin{array}{r} 1989 \\ - 873 \\ \hline 1116 \end{array}$$

$$\begin{array}{r} 1116 \\ + 873 \\ \hline 1989 \end{array}$$

∴ The other number is 1116.

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LEARNING OUTCOME:

Children are confident of acquiring the knowledge that Addition and subtraction is related, know that every addition statement has 2 subtraction facts, know subtraction is an inverse process of addition and be able to find out the missing digit implementing the facts.



**THANKING YOU
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