ADDITION BALANCE EQUATION

BALANCE EQUATION

Definition:

- ✓ An addition balance equation is an equation where the sum of the numbers on one side of the equal sign is equal to the sum of the numbers on the other side of the equal sign.
- ✓ Balance equation have an equal sign and both side of equal sign must be same value
- ✓ Here are some other examples of addition balance equations:

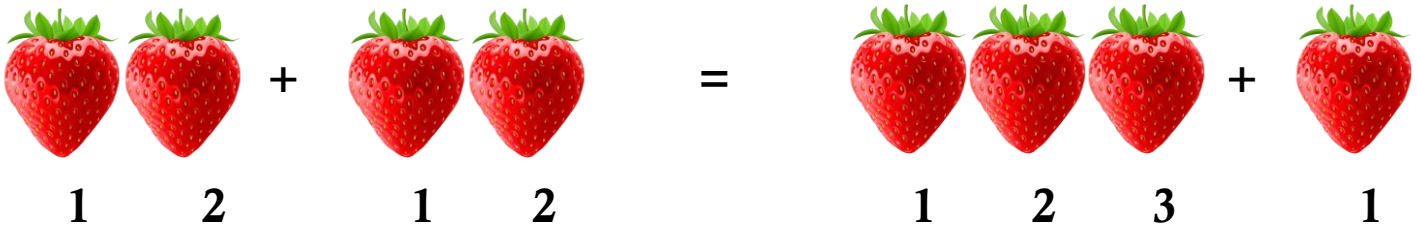
$2 + 3 = 4 + 1$

$4 + 4 = 6 + 2$

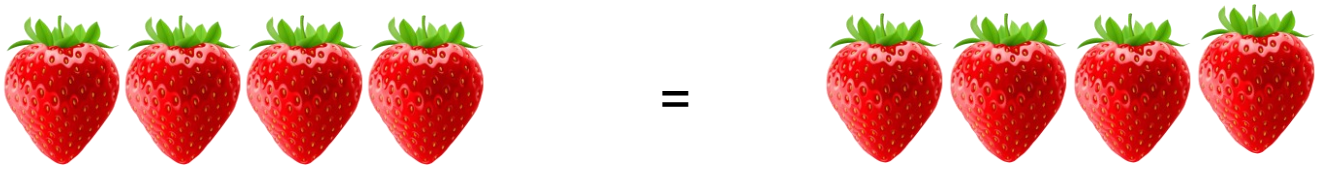
$5 + 4 = 9 + 0$

2 + 2 = 3 + 1 example for addition equation.

2 + 2 = **3 + 1 =**



1 2 1 2 1 2 3 1



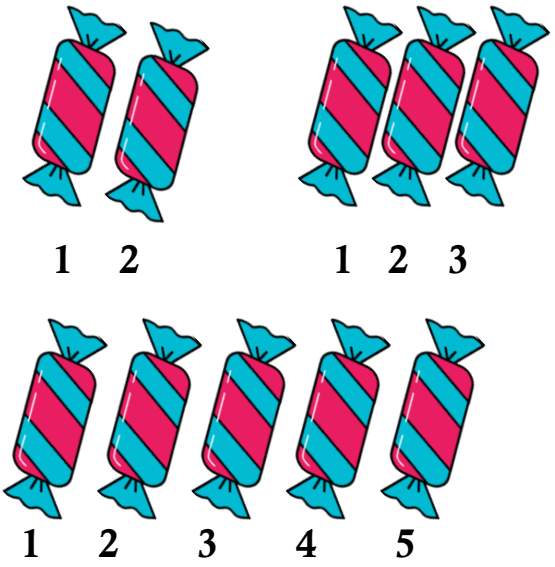
1 2 3 4 1 2 3 4

So, 2 + 2 = 3 + 1 = 4

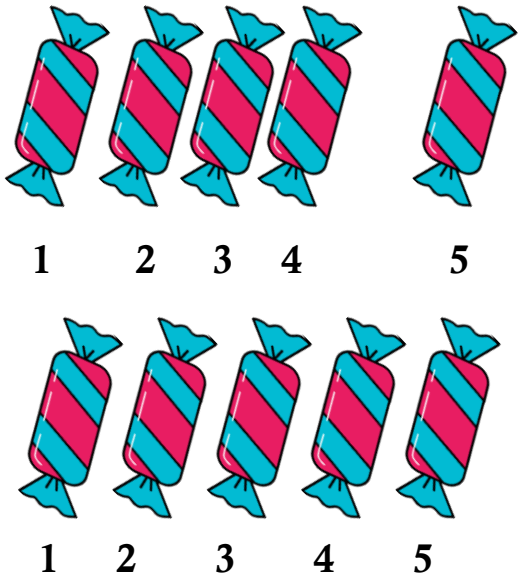
- This equation is balanced because the sum of 2 + 2 = 3 + 1 is equal to 4.

2 + 3 = 4 + 1 example for addition equation.

2 + 3 =



4 + 1 =



This equation is balanced because the sum of 2 + 3 and sum of 4 + 1 is equal to 5.

So, 2 + 3 = 4 + 1 = 5

Examples for balanced equation

1) **15 + 12 = 10 + 17**

L.H.S

15 + 12 = ?

$$\begin{array}{r} 1\,5 \\ +\ 1\,2 \\ \hline 2\,7 \end{array}$$

5 + 2 = 7
1 + 1 = 2

15 + 12 = 27

R.H.S

10 + 17 = ?

$$\begin{array}{r} 1\,0 \\ +\ 1\,7 \\ \hline 2\,7 \end{array}$$

0 + 7 = 7
1 + 1 = 2

10 + 17 = 27

15 + 12 = 10 + 17 = 27

2) 24 + 22 = 35 + 11

L.H.S

24 + 22 = ?

$$\begin{array}{r} 2\ 4 \\ +\ 2\ 2 \\ \hline 4\ 6 \end{array}$$

4 + 2 = 6
2 + 2 = 2

24 + 22 = 46

R.H.S

35 + 11 = ?

$$\begin{array}{r} 3\ 5 \\ +\ 1\ 1 \\ \hline 4\ 6 \end{array}$$

5 + 1 = 6
3 + 1 = 4

35 + 11 = 46

24 + 22 = 35 + 11 = 46

3) 30 + 30 = 40 + 20

L.H.S

30 + 30 = ?

$$\begin{array}{r} 3\ 0 \\ +\ 3\ 0 \\ \hline 6\ 0 \end{array}$$

0 + 0 = 0
3 + 3 = 6

30 + 30 = 60

R.H.S

40 + 20 = ?

$$\begin{array}{r} 4\ 0 \\ +\ 2\ 0 \\ \hline 6\ 0 \end{array}$$

0 + 0 = 0
4 + 2 = 6

40 + 20 = 60

30 + 30 = 40 + 20 = 60

Examples for balanced equation

1) 30 + 31 = 40 + 21

30 + 31 = 61

40 + 21 = 61

30 + 31 = 40 + 21 = 61

2) 52 + 25 = 45 + 32

52 + 25 = 77

45 + 32 = 77

52 + 25 = 45 + 32 = 77

3) 59 + 30 = 49 + 40

59 + 30 = 89

49 + 40 = 89

59 + 30 = 49 + 40 = 89

4) 62 + 34 = 51 + 45

62 + 34 = 96

51 + 45 = 96

62 + 34 = 51 + 45 = 96

Example 1: Find the missing number 5 + □ = 6 + 3

Solution :

On the left hand side, we have

5 + □

But On the right hand side, we have

6 + 3 ⟹ 6 + 3 equals to 9 ⟹ 6 + 3 = 9

In a balanced equation, both left and right hand side answers will be the same.

Therefore, 5 + □ = 9

What number should be added to 5 to get 9? 9 – 5 = 4

That is 4. 5 + 4 = 9

5 + 4 = 6 + 3 = 9