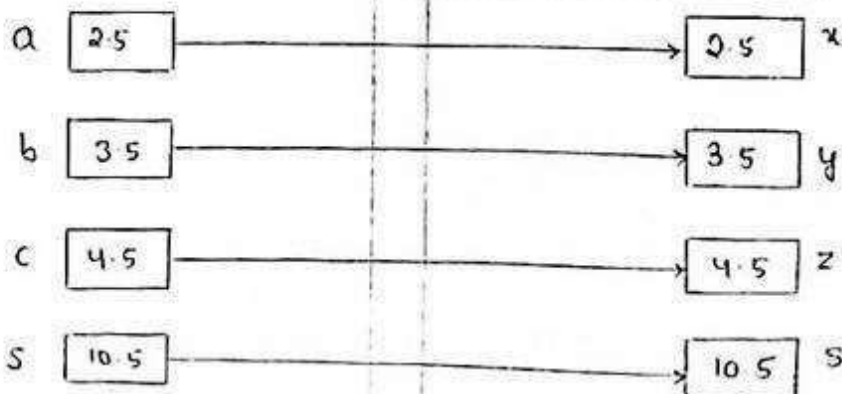# Passing arguments to Functions (or parameter passing):

This mechanism is used to convey information to the function is the arguments or parameters. When values are passed to the function via actual arguments, the value of the actual argument is copied in the formal argument. Therefore, the changes made to the formal argument have no effect on the actual argument. This procedure of passing the value of the argument to a function is known as **call by value**.

```
/* Calling Function */

# include <stdio.h>
# include <conio.h>
void main()
{
    float a,b,c, sum;
    clrscr();
    float addition (float, float, float);
    printf(" Enter 3 numbers :");
    scanf ("%f %f %f", &a, &b, &c);
    sum = addition (a,b,c);
    printf (" Result = %f\n", sum);
    getch();
}
```

```
/* called Function */

float addition (float x, float y,
                          float z)
{
    float s;
    s = x+y+z;
    return s;
}
```

a	2.5	→	2.5	x
b	3.5	→	3.5	y
c	4.5	→	4.5	z
s	10.5	←	10.5	s

(Call by value parameter passing mechanism)

→ .Call- by value mechanism does not change the content of the arguments in the calling function even if they are changed in the called function.

→ Formal parameters are stored in the local data area of the called function. So the changes to the formal parameter within the function will effect only the local copy, and will have no effect on the actual argument.

→ Function accesses arguments by using the argument names in the function header. The actual and formal arguments should math in number, type and order.

→ The value of actual arguments are assigned to the formal arguments on one to one basis, starting with the first argument.

Advantages and disadvantages of Call by value :

Passing an argument by value has advantages and disadvantages.

→ The advantages are that it allows a single-valued argument to be written as an expression, rather than being restricted to a single variable.

→ Furthermore, in cases where the argument is a variable, the value of this variable is protected from alterations which take place within the function.

→ The main disadvantage is that information cannot be transferred back to the calling portion of the program via arguments. In other words, passing by value is a strictly one-way method of transferring information.